

SONY.

3-860-608-21 (1)

Color Video Printer

Instructions For Use Page 2

Before operating this unit, please read this manual thoroughly and retain it for future reference.



UP-2300P/2800P/2850P

UP-2900MD/2950MD

© 1997 by Sony Corporation

Owner's Record

The model and serial numbers are located at the rear. Record these numbers in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. _____
Serial No. _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

For UP-2800P/2850P/2900MD/2950MD Symbol on the products



This symbol indicates the equipotential terminal which brings the various parts of a system to the same potential.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

For the customers in the U.S.A.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment. This device requires shielded interface cables to comply with FCC emission limits.

For the customers in Canada (for UP-2800P/2850P/2900MD/2950MD)

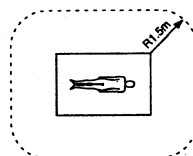
This unit has been certified according to Standard CSA C22.2 No.601.1.

For the customers in Europe (for UP-2800P/2850P/2900MD/2950MD)

Important safeguards/notices for use in the medical environments

1. All the equipments connected to this unit shall be certified according to Standard IEC601-1, IEC950, IEC65 or other IEC/ISO Standards applicable to the equipments.
2. When this unit is used together with other equipment in the patient area*, the equipment shall be either powered by an isolation transformer or connected via an additional protective earth terminal to system ground unless it is certified according to Standard IEC601-1.

* Patient Area



3. The leakage current could increase when connected to other equipment.
4. This equipment generates, uses, and can radiate frequency energy. If it is not installed and used in accordance with the instruction manual, it may cause interference to other equipment. If this unit causes interference (which can be determined by unplugging the power cord from the unit), try these measures: Relocate the unit with respect to the susceptible equipment. Plug this unit and the susceptible equipment into different branch circuit. Consult your dealer.

Tabel of Contents

Introduction

About This Manual	5
System Overview	7
System Configuration	8

Operation

Before Printing	9
Loading an Ink Ribbon Cartridge	9
Loading Paper	12
Selecting the Input Signal	14
Making Full-Size Printouts	16
Making Multiple Copies of Identical Printouts	19
Capturing Another Image While Printing	22
Making Variations of Printouts	24
Selecting the Printer Application Mode	25
About the Memory	28
Making a Printout of Multiple Different Reduced Images	32
Making Printouts for Stickers	42
Making Printouts for Identification Photographs	43
Making Printouts With a Caption	50
Entering a Caption	51
Deleting the Images Stored to Memory Pages	56
Setting the Function of the CLEAR Button	56
Deleting Images	59

Installation and Adjustment

Supplied Accessories	61
Assembly	62
Preparing the Remote Control Unit	63
Connections	65
Making Connections for Storing Video Images	65
Making Connections for Viewing Images to be Printed	66
Making Connections to Enable Remote Control	67

Continue to next page →

Tabel of Contents

Installation and Adjustment (Continued)

Setting Up the Printer	68
Compensating for the Input Signals	69
Matching the Video Monitor Color to the Printer Color	72
Adjusting the Printout Color	75
Changing the Printout Size/Printout Area	82
Selecting the Operation Mode for Automatic Printing Capabilities	85
Erasing the Screen Display	89
Adjusting the Brightness of the Printer Window Display	91
Selecting Whether the Operation and Error Tones Sound	93
Setting the Baud Rate for Computer Communication ...	95

Others

Precautions	97
Safety	97
Installation	97
Cleaning	98
Ink Ribbon Cartridge and Paper	99
Specifications	100
Error/Warning Messages	103
If the paper jams	105
Troubleshooting	107
Location and Function of Parts and Controls	108
Front	108
Sub Panel	110
Rear	111
Monitor Display	113
Index	115

Introduction

About This Manual

This manual covers the following UP-2000 series color video printers.

- UP-2300P
- UP-2800/2800P
- UP-2850P
- UP-2900MD
- UP-2950MD

Wherever the operation or any other item differs between the models, this manual clearly describes those differences.

The difference among models is as follows.

	No. of memories	RGB SYNC connector	Printer window display (LCD)	NTSC/PAL selector (TV system)
UP-2300P	1	None	None	None (PAL)
UP-2800P	1	Yes	Yes	None (PAL)
UP-2850P	4	Yes	Yes	None (PAL)
UP-2900MD	1	Yes	Yes	Yes (NTSC/PAL)
UP-2950MD	4	Yes	Yes	Yes (NTSC/PAL)

In this manual, the UP-2950MD is used for illustrations.

Also, the monitor display and printer window display are used to explain the operation. If your printer is a UP-2300P which is not equipped with the printer window display, perform operations according to the monitor display explanation.

Organization of this manual

This manual is divided into four chapters. This section explains the organization of this manual.

Introduction

Describes the features and system configuration of the color video printer.

Operation

Describes actual printing once all connections and adjustments have been made, as explained in the next chapter. You will be able to make various types of printouts after reading through this chapter.

Installation and adjustment

Describes how to make connections and make adjustments using the menus displayed on the video monitor and printer window display. Once all connections and adjustments have been made, there should be no need to perform these operations again during normal printing operations. These operations must, however, be performed after reinstalling, or if the picture quality degrades, or if adjustment becomes necessary because the peripheral equipment is changed. Also covered is the use of the printer's remote control unit (not supplied).

About This Manual (continued)

Others

Notes the precautions to be observed when using the printer, lists errors, warnings and their handling, and explains troubleshooting. Also provided is information on the locations and functions of parts and controls, and the on-screen messages and menus used to operate the printer. Should you encounter any unfamiliar terms or items while reading this manual, consult the index at the end of the manual.

Conventions used

Cross references

Throughout this manual you will find references to other sections of the manual that contain related information.

Important note

Be sure to read the sections of the manual marked **Note**. They explain points that you should be aware of to operate the printer correctly and prevent malfunctions.

Index

Use the index, in addition to the table of contents, to find information you need when using the printer.

Monitor displays

Some monitor displays illustrated in this manual may differ slightly from the actual display. The operation of the printer, however, remains as described in this manual.

System Overview

The UP-2000 series color video printer is designed for capturing images from video equipment such as VTR and for printing out high-resolution images, either in 256 shades in full color (about 300 dpi). You can make various types of printouts. You can also add a caption onto the printout. You can operate the daily printer operation by using the buttons and setup the printer interactively by picking from displayed menus.

Printouts that can be made with the printer

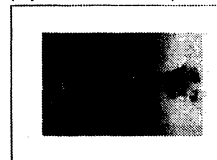
Printout of a full-size image (page 16)



Printout of 16 reduced images (page 32)



Printout of two reduced images (page 32)
Capturing the whole screen
(only for UP-2850P/2950MD)



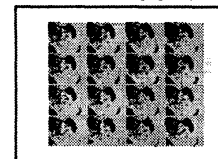
Printout of identical images ^{a)} (page 43)



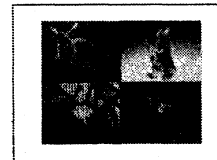
Printout of two reduced images
Capturing the center of the
screen (page 32)



Printout for stickers ^{a)} (page 42)



Printout of four reduced images
(page 32)



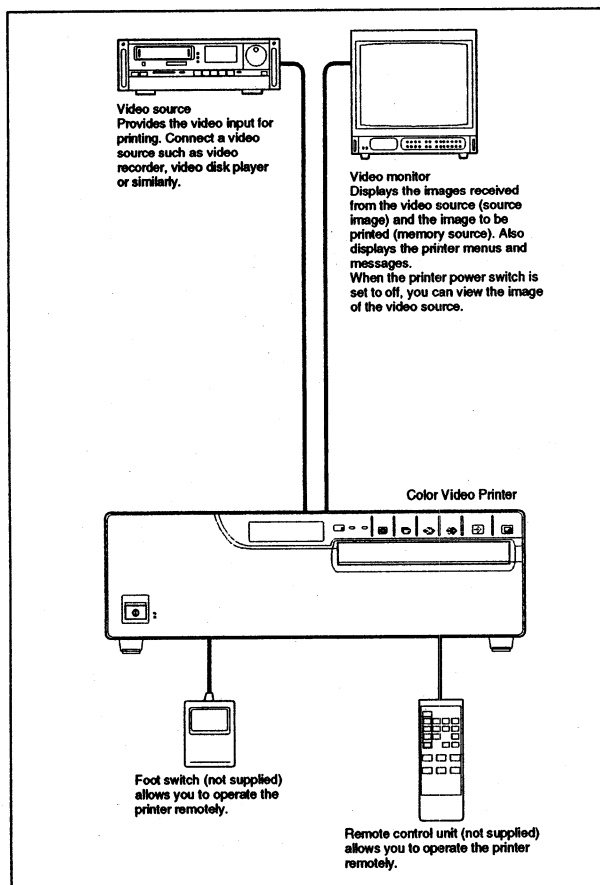
- a) This can be used for identification photographs and there are two types.
In one type, the size of one image in one printout can be adjusted freely. In the other, the size of one image is fixed.
For details, see page 43.
- b) There are two types of sticker-printouts.
In one type, all images in a single printout are identical. In the other, all images in a single printout are different.
For details, see page 42.

You can add a caption onto printouts introduced here.

System Overview (continued)

System Configuration

The following shows an example printer system configuration.



Operation

Before Printing

This section describes the following operations that must be made prior to starting printing after mounting the paper tray and paper cover on the printer and making the necessary connections.

- Loading an ink ribbon cartridge (see below)
- Loading paper (see page 12)
- Selecting the input signal (see page 14)

Once the above operations have been completed, there should be no need to repeat them during routine printing. Perform them only when absolutely necessary.

Loading an Ink Ribbon Cartridge

To make printouts, an ink ribbon cartridge and paper (which are compatible) must be loaded. (see "Ink Ribbon Cartridge and Paper" page 99)

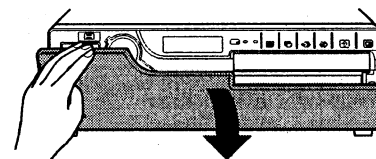
If the printer detects an incompatible combination, an error message appears.

Use the ink ribbon cartridge and print paper (supplied) to check if the video printer functions properly.

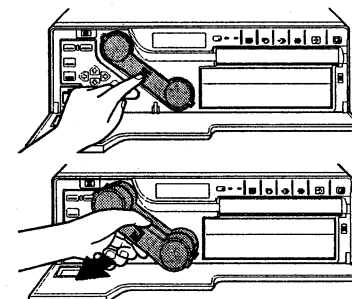
Notes

- Use only ink ribbon cartridge and paper that are designed for use with this printer. Failing to do so is likely to result in unsatisfactory printing or malfunctions.
- When replacing the ink ribbon cartridge, do not turn off the power. Turning off the power will cause the image stored in the memory to be lost.

- 1 Open the front panel by pulling the front panel top toward you.



- 2 Remove the ink ribbon cartridge by pushing the ink ribbon cartridge itself. The ink ribbon cartridge pops out. When you use the printer first, this operation is not required.

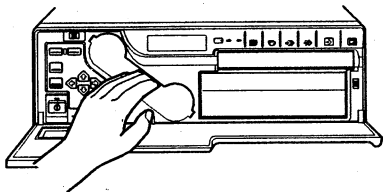


Continue to next page →

Before Printing (continued)

Note

Never put your hand into the ink ribbon compartment. The thermal head becomes very hot. You may burn yourself if you touch it.

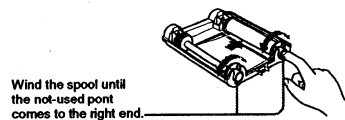


When the ink ribbon cartridge cannot be ejected

Turn the power off, then back on again. Then, after a while, press the ink ribbon cartridge.

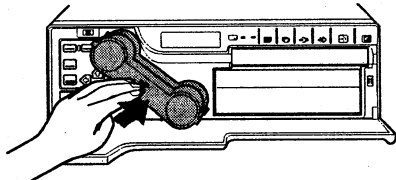
In this case, the image in memory will be lost.

- 3** Remove any slack from the ink ribbon.
If the ribbon is left slack, it may be damaged when inserted.



Wind the spool until the not-used part comes to the right end.

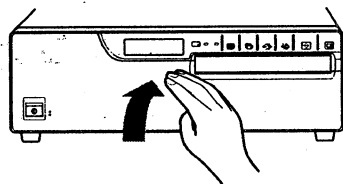
- 4** Insert the ink ribbon cartridge firmly until it stops.



When the ink ribbon cartridge cannot be inserted

Turn the power off, then back on gain. Then, insert the ink ribbon holder.

- 5** Close the front panel.



Notes

When using ink ribbon cartridge

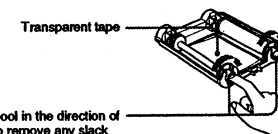
- Once an ink ribbon cartridge has been completely used, replace it. Ink ribbon cartridges are not reusable.
- Do not touch the ink ribbon cartridge or place it in a dusty location. Finger prints or dust on the ink ribbon will result in imperfect printing or malfunction of the head.

When storing ink ribbon cartridge

- Avoid placing the ink ribbon in a location subject to:
 - high temperatures
 - high humidity
 - excessive dust
 - direct sunlight
- Store a partially used ink ribbon cartridge in its original packaging.

If your ink ribbon should tear

Repair the tear with transparent tape. There should be no problem with using the remaining portion of the ribbon.



Transparent tape

Turn the spool in the direction of the arrow to remove any slack until the transparent tape cannot be seen.

Before Printing (continued)

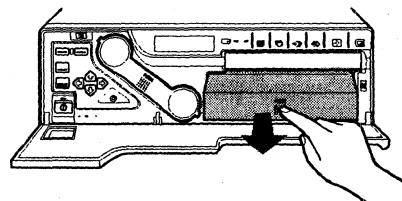
Loading Paper

To load paper, follow the procedure below. Be careful not to touch the printing surface.

Notes

- When loading the paper while the printer is operating, do not turn off the power. Turning off the power will cause the image stored in memory to be lost.
- Do not touch the ink ribbon when handling the paper.

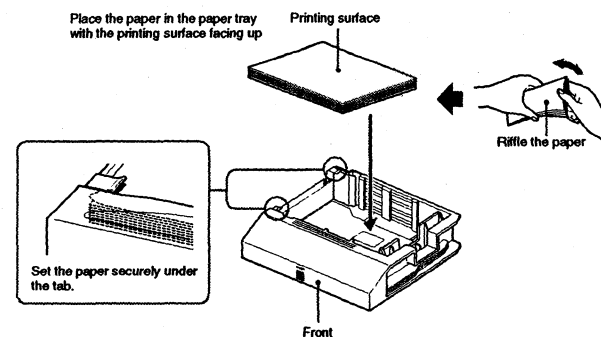
- 1 Open the front panel by pulling the front panel top towards you.
- 2 Push the part marked with PUSH on the paper tray. The paper tray pops out.



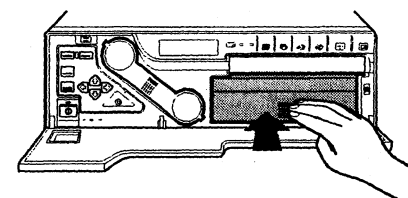
- 3 Place the paper in the paper tray.

Notes

- The amount of paper that the paper tray holds depends on the paper in use. When adding paper to a partly full tray, be careful that the total number of sheets does not exceed the limit. If you exceed this limit, paper jams may occur. The limit is the amount of paper contained in one printing pack. For detailed information on the maximum amount of paper that the paper tray can hold, see "Ink Ribbon Cartridge and Paper" page 99.
- Do not place different types of paper in the tray. Doing so may cause paper jams to occur.
- Load the paper so that it lays flat in the paper tray. If the paper is curled, it will overflow from the paper tray and the printing position may shift. If this happens, load fewer sheets in the paper tray.



- 4 Slide the paper tray back into the printer until it clicks into place.



- 5 Close the front panel.

Notes

When handling the paper

Do not touch the printing surface. Dust or finger prints are likely to cause unsatisfactory printing or malfunction of the head. Hold the paper by the printing surface protection sheet.

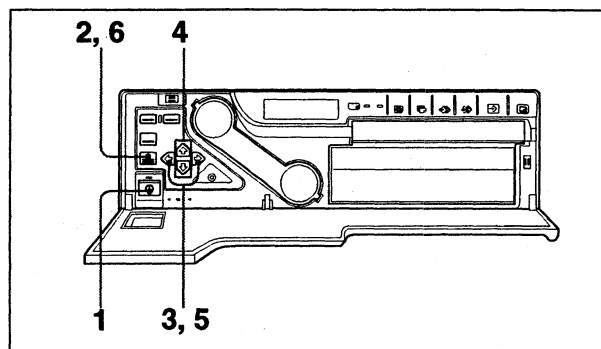
When storing the paper

- Avoid storing the paper in a location subject to:
 - high temperatures
 - high humidity
 - excessive dust
 - direct sunlight
- Use the original package for storing unused paper.

Before Printing (continued)

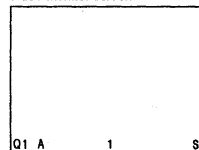
Selecting the Input Signal

Before printing, select the input signal (the input connector to which the signal to be printed is being input—VIDEO, S-VIDEO, or RGB (except UP-2300P). Once you have selected the input signal, this setting remains effective until you select another source.

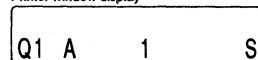


- 1 Turn on the video monitor and the printer.
The following appears.

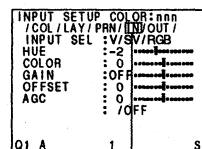
Video monitor screen



Printer window display



- 2 Press the MENU button.
The screen previously poened appears.
- 3 Select IN by pressing the ◀ or ▶ button.

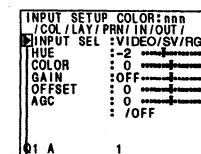


By switching IN to green with the ◀ or ▶ button, INPUT SETUP appears.



Display IN in capital letters by pressing the ◀ or ▶ button, INPUT SETUP appears.

- 4 Select INPUT SEL by pressing the ◀ or ▶ button.

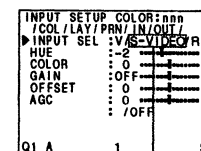


Position the cursor to INPUT SEL by pressing the ◀ or ▶ button.

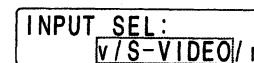


Press the ◀ or ▶ button until INPUT SEL appears.

- 5 Select the input signal by pressing the ◀ or ▶ button.



Switch the desired input signal to green by pressing the ◀ or ▶ button. The selected input signal turns green and is spelled out.



Disply the spelled-out input signal by pressing the ◀ or ▶ button. The selected input signal turns green and is spelled out.

Source signal of the image to be printer

Source signal of the image to be printer	Video monitor and printer window display (the selected input signal is spelled out)
Signal from video equipment connected to the VIDEO INPUT connector	V → VIDEO
Signal from video equipment connected to the S-VIDEO INPUT connector	S → S VIDEO
Signal from video equipment connected to the RGB/SYNC INPUT connectors ^{a)} R → RGB	

a) Models except UP-2300P are equipped with the RGB/SYNC connectors.

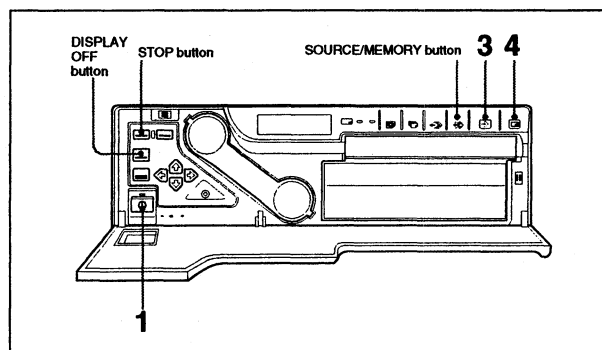
- 6 Press the MENU button.
The regular screen appears.

Making Full-Size Printouts

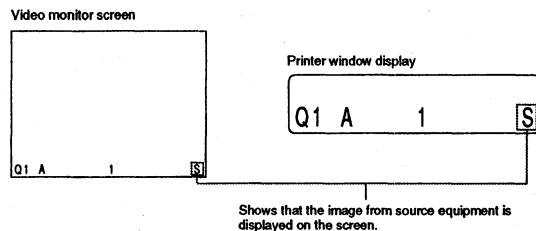
This section explains how to make a full-size printout. The operations described here constitute the basic procedure for making a printout.

Before making a full-size printout

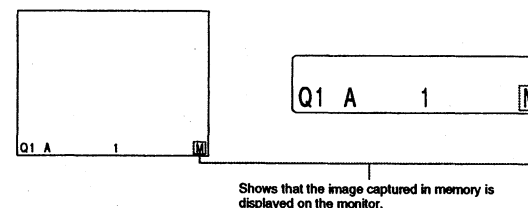
- All connections should have already been made. (see page 65)
- Ensure that the appropriate ink ribbon cartridge/paper set is being used and that they are correctly loaded. (see pages 9, 12 and 99)
- Select the input signal to be used to make a printout. (see page 14)
- Set the printer to store one full-size image into memory. (see page 32)
- Select the appropriate memory page. (see page 31)



- 1 Turn on the video monitor and the printer.
- 2 Start the video source.
This operation is done using the controls of the video equipment acting as the source.



- 3 Press the CAPTURE button at the instant when the image you want to print appears on the screen.
The image is captured into memory. The memory image is displayed on the screen. Which image appears after this, the source image or memory image, depends on the setting made with AUTO LIVE on the FUNCTION SETUP menu (page 38).



If the stored image is blurred

A quickly moving image may be blurred when printed. Should this occur, change the MEMORY setting to FIELD on the LAYOUT SETUP menu. Although the blur should be eliminated, the ultimate print quality will be slightly degraded.
For details, see page 29.

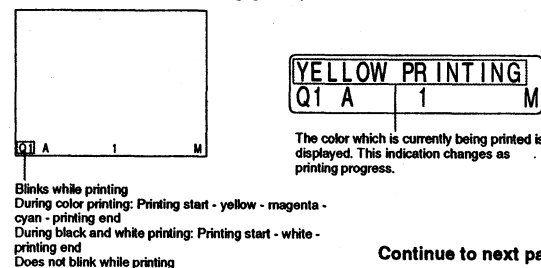
To change the image in memory

- ① To display the source image when the memory image is displayed on the screen, press the SOURCE/MEMORY button.
- ② Press the CAPTURE button at the instant the image you want to print appears. The previous image is replaced with the new one.

Note

If you turn off the power, the image stored in memory will be lost. Should this happen, store the image into memory again after turning on the power. If no image is stored in memory, the printer will not print even if you press the PRINT button.

- 4 Press the PRINT button.
It takes about 35 seconds to make a printout.
The printout pops out from the paper tray.



Continue to next page →

Making Full-Size Printouts (continued)

Note

- Do not turn off the power during printing.
If you do so, paper may not be ejected and may jam in the printer.
- Do not pull the paper from the paper cover until printing has been completed.
- You can not change the printer application mode or settings on the WINDOW SETUP menu during printing.

To stop printing

Press the STOP button. Printing is abandoned and the paper is ejected to the print tray.

If the printer does not print

The printer will fail to print in the following cases:

- While an error message is displayed on the monitor screen and printer window display.
 - In this case, the paper is ejected without printed even if you press the PRINT button. Proceed as described in "Error/Warning Messages" on page 103.
- Image is not stored in the memory.
 - Image data stored in the memory is lost if you turn off the power. Capture the image into memory again, then press the PRINT button.

When you want to see an image that is hidden below a screen message

You can erase the screen message from the video monitor screen by pressing the DISPLAY OFF button. The screen message disappears. To display a screen message, press the DISPLAY OFF button again.

If a black line appears on the printout

Sometimes, a black line appears on the printout, although it does not appear on the video monitor. This black line can be eliminated from the printout. (see "Changing the Printout Size/Printout Area" page 82)

If the image quality of printouts is not satisfactory

You can adjust the image quality of the printouts. (See "Adjusting the Printout Color" pages 75)

Notes

When storing your printouts:

- Avoid storing the printout in a location subject to high temperatures, high humidity, excessive dust and direct sunlight.
- Do not stick tape on a printout. Also, avoid leaving a plastic eraser on a printout or placing a printout in contact with materials which contain plasticizer (under a desk mat, for example).
- Do not allow alcohol or other volatile organic solvents to come into contact with the printouts.

Making Multiple Copies of Identical Printouts

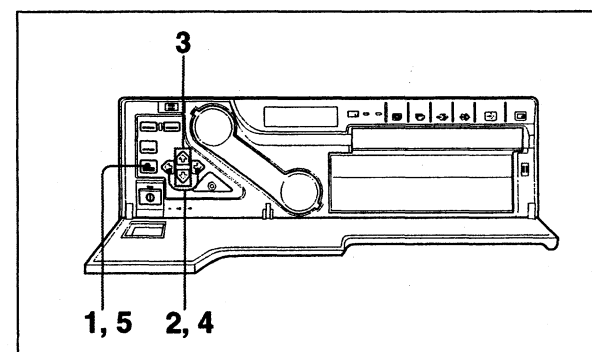
You can make up to 9 copies of identical printouts.

The following two methods are available to set the number of printouts.

- On the menu
- Using the PRINT QTY button. However, you cannot decrease the number of printouts.

The following steps can be performed either before you start printing or while printing. You can change the designated number of copies any time during printing.

Setting the printout quantity on the menu



- 1 Press the menu button.
The menu previously opened appears.

- 2 Select PRN by pressing the ◀ or ▶ button.
The PRINTER SETUP menu appears.

```

PRINTER SETUP COLOR nnn
P/COL/LAY/PRN/IN/OUT/
PRINT QTY 09 [1-9]
INTERVAL : OFF/ON
GAMMA : S/NORMAL/H
SYSTEM : PRESS [1]
FUNCTION : PRESS [2]

Q1 A1 2HF S
  
```

By switching PRN to green by pressing the ◀ or ▶ button, PRINTER SETUP appears.

```

PRINTER SETUP
/c/i/PRN/i/o/
  
```

Display PRN in capital letters by pressing the ◀ or ▶ button.

Continue to next page →

Making Full-Size Printouts (continued)

- 3** Select PRINT QTY by pressing the \diamond or ∇ button.

```

PRINTER SETUP COLOR nnn
▶/COL/LAY/PRN/IN/OUT/
PRINT QTY : 9 [1-9]
INTERVAL : OFF/ON
GAMMA : S/NORMAL/H
SYSTEM : PRESS [>]
FUNCTION : PRESS [>]

Q1 A1 2HF S
  
```

Position the cursor to PRINT QTY by pressing the \diamond or ∇ button.

```

PRINT QTY:
  9 [1-9]
  
```

Press the \diamond or ∇ button until PRINT QTY appears.

- 4** Set the number of copies by pressing the \triangleleft or \triangleright button.

```

PRINTER SETUP COLOR nnn
▶/COL/LAY/PRN/IN/OUT/
PRINT QTY : 9 [1-9]
INTERVAL : OFF/ON
GAMMA : S/NORMAL/H
SYSTEM : PRESS [>]
FUNCTION : PRESS [>]

Q1 A1 2HF S
  
```

Quantity of copies

```

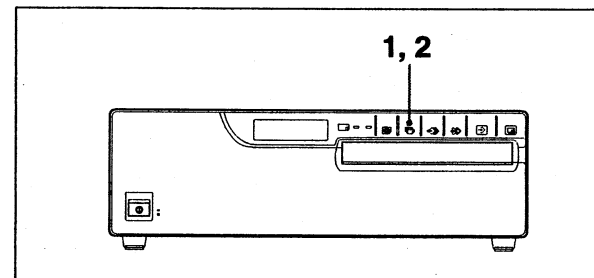
PRINT QTY:
  9 [1-9]
  
```

Quantity of copies

When setting	Button
To increase the quantity \triangleright	\triangleright
To decrease the quantity \triangleleft	\triangleleft

- 5** Press the MENU button.
The regular screen appears.

Setting the print out quantity by using the PRINT QTY button



- 1** Press the PRINT QTY button.
The following screen appears.
If you do not perform any operation after you press the PRINT QTY button, the currently set number of copies appears for 2 or 3 seconds, after which it disappears.

```

▶PRINT QTY: [1-9]
  
```

The currently set number of copies appears within a couple of seconds.

```

PRINT QTY:
  1 [1-9]
  
```

The currently set number of copies appears within a couple of seconds.

- 2** Press the PRINT QTY button until the desired number appears.
Repeatedly pressing the PRINT QTY button increases the quantity up to 9 and stops.

To decrease the number of copies

When decreasing the number of copies, you have to change the number on the menu.

If the paper runs out during printing

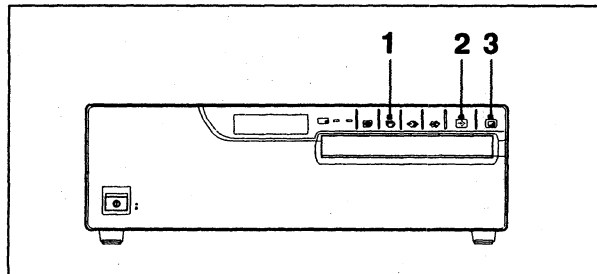
Load the paper into the paper tray and press the PRINT button. The printer prints the remaining copies.

Making Full-Size Printouts (continued)

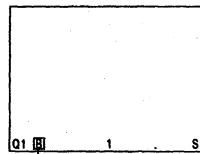
Capturing Another Image While Printing

While the printer is printing, you can capture another image into another memory page to be printed once the printer becomes free. The usable memory pages depend on the type of printouts and settings. (pages 28 and 29)

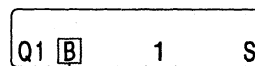
For UP-2300P/2800P/2900MD, you can capture another image while printing only in field mode.



- 1 Select the desired memory page by pressing the MEMORY PAGE button. Pressing the MEMORY PAGE button switches the memory page.



The available memory pages appear in white.



The currently selected memory page.

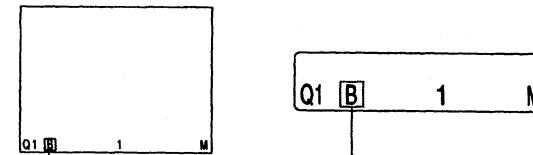
- 2 Press the CAPTURE button at the instant the image you want to print appears on the screen.

Note

If you press the CAPTURE button to capture the image into memory page whose image is being printed, "PLEASE WAIT PRINTING MEMORY" appears and the image cannot be captured.

- 3 Press the PRINT button.

The image captured in step 2 is queued. The image is printed as soon as all previous printing jobs have been completed.



Memory page whose image has been queued for printing (blinks white on the video monitor)
The memory page display returns to white on the video monitor once printing has been completed.

- 4 To queue another memory page, repeat steps 1, 2 and 3.

Note

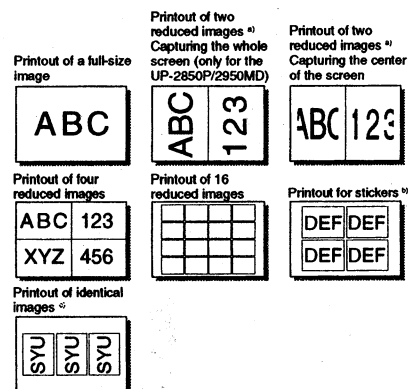
Another image cannot be stored into a memory page into which an image has already been queued for printing. In such a case, the "PLEASE WAIT RESERVED MEMORY" appears.

Making Variations of Printouts

You can store various kinds of images into memory and make variations of printouts using the images captured into memory.

Variations of printouts that the printer can produce

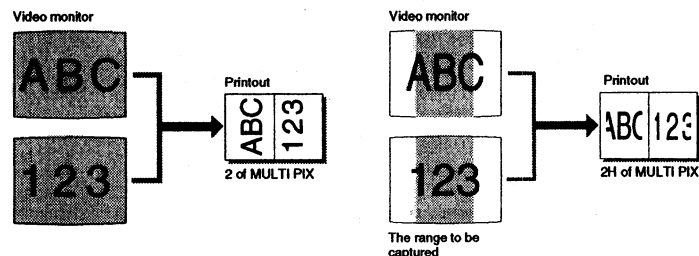
The following variations of printout of the images stored in memory can be made.



- a) For detailed information on the difference of two types of two-reduced images, see the following "About the printout with two reduced images".
- b) There are two types of sticker-printouts. One is the printout where all images in one printout are identical. The other is the one where all images in one printout are different.
- c) This can be used for identification photograph and there are two types. One is the printout where the size of one image in one printout can be adjusted freely. The other is the one where the size of one image is fixed.

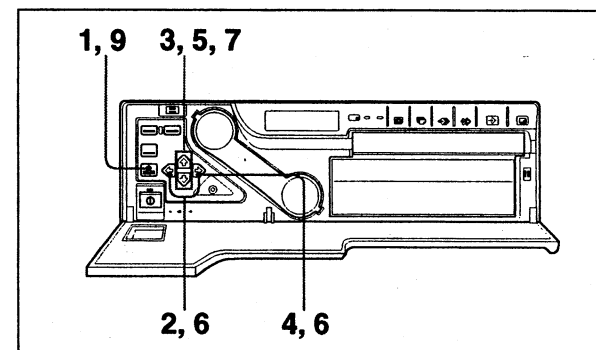
About the printout with two reduced images

There are two types of printouts with two reduced images. One type is 2 and the other is 2H in the MULTI PIX items of the LAYOUT SETUP menu. For the item 2 (only for the UP-2850P/2950MD), the image in the whole screen is captured in memory. For the item 2H print mode, the image in the center of the screen is captured in memory.

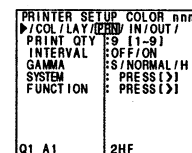


Selecting the Printer Application Mode

The unit allows you to make printouts according to your need, such as regular printouts, printouts for identification photograph and printouts for sticker. You can select the application mode of the printer on the SYSTEM SETUP menu. When you use the printer first time, the standard application mode for regular printouts is selected. Select the application mode according to what kind of printouts you want to make.



- 1 Press the MENU button.
The menu previously opened appears.
- 2 Select PRN by pressing the ◀ or ▶ button.
The PRINTER SETUP menu appears.



PRINTER SETUP
/c/i/PRN/i/o/

Display PRN in capital letters by pressing the ◀ or ▶ button.

By switching PRN to green by pressing the ◀ or ▶ button, PRINTER SETUP appears.

Continue to next page →

Making Variations of Printouts (continued)

- 3 Select SYSTEM by pressing the \diamond or \triangleright button.

```

PRINTER SETUP COLOR nnn
/ COL / LAY / PRN / IN / OUT /
PRINT QTY : 9 [1-9]
INTERVAL : OFF / ON
OAMMA : S / NORMAL / H
SYSTEM : PRESS [>]
FUNCTION : PRESS [>]

Q1 A1 2HF S
  
```

Position the cursor to SYSTEM by pressing the \diamond or \triangleright button.

```

SYSTEM :
PRESS [>]
  
```

Press the \diamond or \triangleright button until SYSTEM appears.

- 4 Press the \diamond button.
The SYSTEM SETUP menu appears.

```

SYSTEM SETUP COLOR nnn
PRN SETUP : PRESS [>]
LCD-CNTR. : 5
BAUDRATE : /24/4800/96
BEEP : OFF / ON
APPLI. : STANDARD/

Q1 A1 2HF S
  
```

```

SYSTEM SETUP
  
```

- 5 Select APPLI. by pressing the \diamond or \triangleright button.

```

SYSTEM SETUP COLOR nnn
PRN SETUP : PRESS [>]
LCD-CNTR. : 5
BAUDRATE : /24/4800/96
BEEP : OFF / ON
APPLI. : STANDARD/

Q1 A1 2HF S
  
```

Position the cursor to APPLI. by pressing the \diamond or \triangleright button.

```

APPLI. :
STANDARD /
  
```

Press the \diamond or \triangleright button until APPLI. appears.

- 6 Select the desired application mode by pressing the \diamond or \triangleright button.

```

SYSTEM SETUP COLOR nnn
PRN SETUP : PRESS [>]
LCD-CNTR. : 5
BAUDRATE : /24/4800/96
BEEP : OFF / ON
APPLI. : FLEX IPP M/

Q1 A1 2HF S
  
```

Switch the desired mode to green by pressing the \diamond or \triangleright button.

```

APPLI. :
/ FLEX IPP M /
  
```

Display the desired mode in capital letters by pressing the \diamond or \triangleright button.

Application mode	Printout
Standard	Printout with a full-size image, two different reduced images ^{a)} , four different reduced images and 16 different reduced images
FLEX IPP ^{b)}	Printout with identical images of the desired size
FIXED IPP	Printouts of a full-size image, four identical reduced images and 16 identical reduced images
STICK DIF	Sticker-type printouts with different reduced images
STICK DUP	Sticker-type printouts with identical reduced images

a) There are two types: One is "Z" and the other is "2H". "Z" is only for UP-2850P/2950MD.
b) As unit of the image size, either "mm" or "inches" can be selected.

- 7 Select PRN SETUP by pressing the \diamond or \triangleright button.

- 8 Press the \diamond button.
The PRINTER SETUP menu appears.

- 9 Press the MENU button.
The regular screen appears.

Note

Changing the application mode results in clearing images stored in all of memory pages.

Making Variations of Printouts (continued)

About the Memory

To make printouts, it is first necessary to capture the image into memory. When capturing the image, there are two ways to use the memory, one is frame mode and the other is field mode.

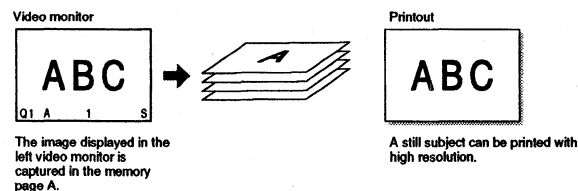
Frame mode: A image is captured in one memory.

Field mode: A memory is divided into two, and images can be captured in each. A memory in which an image is captured is called memory page in this manual. The number of usable memory pages depends on the type of the selected reduced images and memory mode.

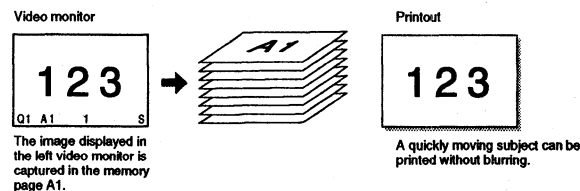
Printer	Reduced image	Memory mode	Number of memory pages
UP-2850P/2950MD	1/2H/2/4/16	Frame	4 (A,B,C,D)
	1/2H/2	Field	8 (A1, A2, B1, B2, C1, C2, D1, D2)
UP-2300P/2800P/2900MD	1/2H/4/16	Frame	1 (A)
	1/2H	Field	2 (A1, A2)

When you select four-reduced image mode or 16-reduced image mode, the unit selects automatically frame mode regardless of the setting of MEMORY on the LAYOUT SETUP menu.

In frame mode



In field mode

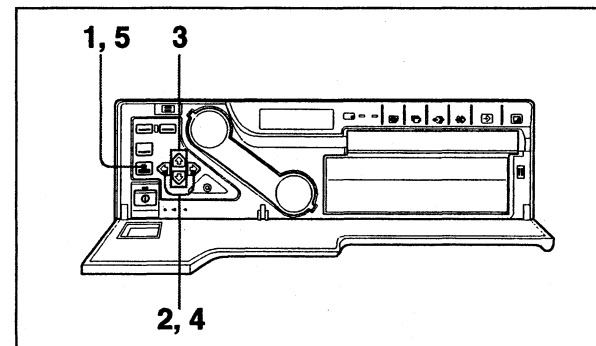


The above illustrations show the case of UP-2850P/2950MD. In case of UP-2300P/2800P/2900MD, there is one memory page in frame mode and two memory page in field mode.

Selecting the memory mode

Note

You can select the desired memory page only when 1, 2 or 2H is selected in STANDARD mode.



- 1 Press the MENU button.
The menu just before opened appears.

- 2 Select LAY by pressing the \leftarrow or \rightarrow button.

```
LAYOUTSETUP COLOR nnn
P/COI /LAY PRN/ IN/OUT/
MEMORY :FRAME/FIELD
MULTI PIX :1/2H/2/4/16
SEPARATE :OFF/ON
WINDOW :PRESS[2]
CAPTION :PRESS[3]
```

Q1 A1 2HF S

By switching LAY to green by pressing the \leftarrow or \rightarrow button, LAYOUT SETUP appears.

LAYOUTSETUP
/c/[LAY]/p/i/o/

Display LAY in capital letters by pressing the \leftarrow or \rightarrow button.

Continue to next page →

Making Variations of Printouts (continued)

- 3 Select MEMORY by pressing the \diamond or ∇ button.

```
LAYOUTSETUP COLOR nnn
/ COL / LAY / PRN / IN / OUT /
MEMORY : FRAME / FIELD
MULTI PIX : 1/2H/2/4/16
SEPARATE : OFF / ON
WINDOW : PRESS [ > ]
CAPTION : PRESS [ > ]

Q1 A1 2HF S
```

Position the cursor to MEMORY by pressing the \diamond or ∇ button.

```
MEMORY :
FRAME / field
```

Press the \diamond or ∇ button until MEMORY appears.

- 4 Select the desired memory mode by pressing the \rightarrow or \leftarrow button.

```
LAYOUTSETUP COLOR nnn
/ COL / LAY / PRN / IN / OUT /
MEMORY : FRAME / FIELD
MULTI PIX : 1/2H/2/4/16
SEPARATE : OFF / ON
WINDOW : PRESS [ > ]
CAPTION : PRESS [ > ]

Q1 A1 2HF S
```

Switch the desired memory mode to green by pressing the \rightarrow or \leftarrow button.

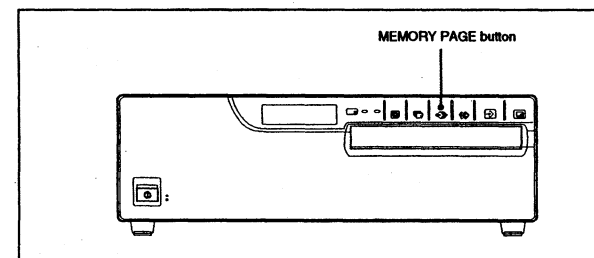
```
MEMORY :
FRAME / field
```

Display the desired memory mode in capital letters by pressing the \rightarrow or \leftarrow button.

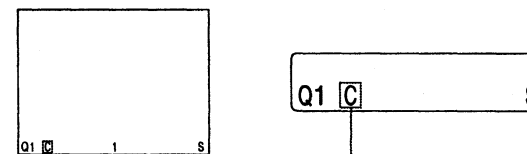
Frame: We recommend that, whenever possible, you print in this mode.
Field: Select this mode to reduce blurring when you print a quickly moving image.

- 5 Press the MENU button.
The regular screen appears.

Selecting a memory page



To select a memory page, press the MEMORY PAGE button.



Press the MEMORY PAGE button as many times as the necessary until the desired memory page appears.

Note

The memory page whose image is being printed is blinking on the video monitor screen. Even if you select this blinking page, you cannot capture the image in this page.

Making Variations of Printouts (continued)

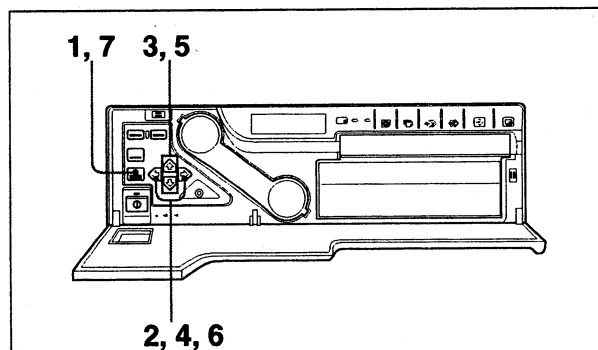
Making a Printout of Multiple Different Reduced Images

You can store multiple images into a memory page and make a printout with those reduced images. This section explains how to make a printout with multiple reduced images.

A printout having multiple reduced images is done by following the procedure below.

- Determining the number of reduced images. (on this page)
- Selecting how to capture the images into memory (page 36)
- Setting the printer application mode to STANDARD (page 25)

Selecting the number of reduced images to be captured in memory



- 1 Press the MENU button.
The menu just before opened appears.
- 2 Select LAY by pressing the \diamond or \triangleright button.

```
LAYOUTSETUP COLOR nnn
/ COL / LAY / PRN / IN / OUT /
MEMORY : FRAME / FIELD
MULTI PIX : 1 / 2H / 2 / 4 / 16
SEPARATE : OFF / ON
WINDOW : PRESS [ > ]
CAPTION : PRESS [ > ]
Q1 A1 2HF S
```

By switching LAY to green by pressing the \diamond or \triangleright button, LAYOUT SETUP appears.

```
LAYOUTSETUP
/ c / LAY / P / i / o /
```

Display LAY in capital letters by pressing the \diamond or \triangleright button.

- 3 Select MULTI PIX by pressing the \diamond or \triangleright button.

```
LAYOUTSETUP COLOR nnn
/ COL / LAY / PRN / IN / OUT /
MEMORY : FRAME / FIELD
MULTI PIX : 1 / 2H / 2 / 4 / 16
SEPARATE : OFF / ON
WINDOW : PRESS [ > ]
CAPTION : PRESS [ > ]
Q1 A1 2HF S
```

Position the cursor to MULTI PIX by pressing the \diamond or \triangleright button.

```
MULTI PIX :
1 / - - / - - / - -
```

Press the \diamond or \triangleright button until MULTI PIX appears.

- 4 Select the desired type of reduced-images printout by pressing the \diamond or \triangleright button.

```
LAYOUTSETUP COLOR nnn
/ COL / LAY / PRN / IN / OUT /
MEMORY : FRAME / FIELD
MULTI PIX : 1 / 2H / 2 / 4 / 16
SEPARATE : OFF / ON
WINDOW : PRESS [ > ]
CAPTION : PRESS [ > ]
Q1 A1 2HF S
```

Switch the desired type of reduced-image printout to green by pressing the \diamond or \triangleright button.

```
MULTI PIX :
- / 2H / - / - / - -
```

Display the desired type of reduced-image printout by pressing the \diamond or \triangleright button.

Displayed type	Number of reduced images
1	1 (Full-size image)
2H	2 (Two reduced images around the center of the screen)
2	2 (Two reduced images of the whole screen) (only for UP-2850P/2950MD)
4	4 (Four reduced images)
16	16 (16 reduced images)

To make a printout of reduced images with white borders, go to step 5.

To make a printout without white borders, skip step 5 and go to step 7.

Continue to next page \rightarrow

Making Variations of Printouts (continued)

- 5 Select SEPARATE by pressing the \diamond or ∇ button.

```
LAYOUTSETUP COLOR nnn
/COL/LAY/PRN/IN/OUT/
MEMORY : FRAME/FIELD
MULTI PIX : 1/2H/2/4/16
SEPARATE : OFF/ON
WINDOW : PRESS [X]
CAPTION : PRESS [X]

Q1 A1 2HF S
```

Position the cursor to SEPARATE by pressing the \diamond or ∇ button.

Note

In the LAYOUT SETUP menu, if items such as MEMORY and SEPARATE are not effective, the application mode other than the STANDARD mode is selected. In such a case, select the STANDARD mode in the SYSTEM SETUP menu first.

- 6 Select whether the images are printed with or without white borders by pressing the \diamond or ∇ button.

When you select	Settings
Printouts without white borders	OFF
Printouts with white borders	ON

```
LAYOUTSETUP COLOR nnn
/COL/LAY/PRN/IN/OUT/
MEMORY : FRAME/FIELD
MULTI PIX : 1/2H/2/4/16
SEPARATE : OFF/ON
WINDOW : PRESS [X]
CAPTION : PRESS [X]

Q1 A1 2HF S
```

Switch the desired mode to green by pressing the \diamond or ∇ button.

```
SEPARATE :
off/ON
```

Press the \diamond or ∇ button until SEPARATE appears.

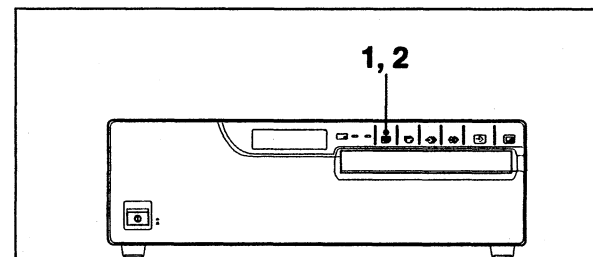
```
SEPARATE :
off/ON
```

Display the desired mode by pressing the \diamond or ∇ button.

- 7 Press the MENU button.
The regular screen appears.

To select the desired type of reduced-image printout using the MULTI PICTURE button

You can select the number of reduced images using the MULTI PICTURE button on the front panel.



- 1 Press the MULTI PICTURE button.
The current setting appears. The video monitor screen is reset to the regular screen after a few seconds.

```
MULTI PIX : 1/2H/2/4/16
```

The currently selected type of reduced-image printout is lit green.

```
MULTI PIX :
1/--/--/--
```

The currently selected type of reduced-image printout is displayed.

- 2 Press the MULTI PICTURE button until the desired type of reduced-image printout appears.
Repeatedly pressing the MULTI PICTURE button switches the type of reduced-image printout

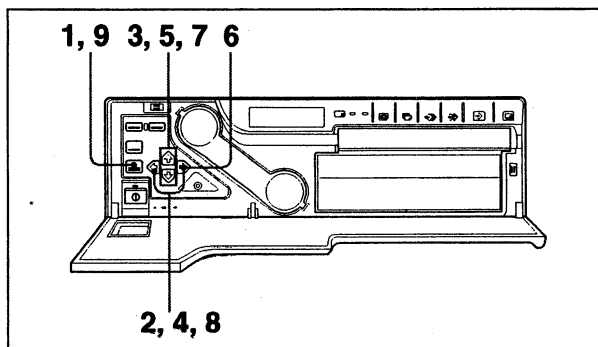
For detailed information on the type of reduced-image printout, see "Selecting the number of reduced images to be captured in memory". (page 32)

Making Variations of Printouts (continued)

Selecting how to capture the images

You can select how to capture the images by using the PRINTER SETUP menu and FUNCTION SETUP menu.

- Storing only the image currently displayed on the video monitor screen or storing images sequentially to all reduced-image positions of a memory page at regular intervals.
- Deciding the image the printer displays on the video monitor screen after capturing the image.



- 1** Press the MENU button.
The menu just before opened appears.

- 2** Select PRN by pressing the ◀ or ▶ button.

```

PRINTER SETUP COLOR nnn
▶/COL/LAY/PRN/IN/OUT/
PRINT QTY : 9 [1-9]
INTERVAL : OFF/ON
GAMMA : S/NORMAL/H
SYSTEM : PRESS [>]
FUNCTION : PRESS [>]
Q1 A1 2HF S
  
```

By switching PRN to green by pressing the ◀ or ▶ button, PRINTER SETUP appears.

```

PRINTER SETUP
/c/i/PRN/i/o/
  
```

Display PRN in capital letters by pressing the ◀ or ▶ button.

- 3** Select INTERVAL by pressing the ◀ or ▶ button.

```

PRINTER SETUP COLOR nnn
/COL/LAY/PRN/IN/OUT/
PRINT QTY : 9 [1-9]
INTERVAL : OFF/ON
GAMMA : S/NORMAL/H
SYSTEM : PRESS [>]
FUNCTION : PRESS [>]
Q1 A1 2HF S
  
```

```

INTERVAL : OFF/ON
  
```

Press the ◀ or ▶ button until INTERVAL appears.

Position the cursor to INTERVAL by pressing the ◀ or ▶ button.

- 4** Select the desired method for storing images by pressing the ◀ or ▶ button.

When you select	Setting
To capture only the image currently displayed on the video monitor screen by pressing the CAPTURE button.	OFF
To capture images sequentially to all positions of a memory page at regular intervals by pressing the CAPTURE button.	ON

```

PRINTER SETUP COLOR nnn
/COL/LAY/PRN/IN/OUT/
PRINT QTY : 9 [1-9]
INTERVAL : OFF/ON
GAMMA : S/NORMAL/H
SYSTEM : PRESS [>]
FUNCTION : PRESS [>]
Q1 A1 2HF S
  
```

```

INTERVAL : OFF/ON
  
```

Display the desired mode in capital letters by pressing the ◀ or ▶ button.

Switch the desired mode to green by pressing the ◀ or ▶ button.

- 5** Select FUNCTION by pressing the ◀ or ▶ button.

```

PRINTER SETUP COLOR nnn
/COL/LAY/PRN/IN/OUT/
PRINT QTY : 9 [1-9]
INTERVAL : OFF/ON
GAMMA : S/NORMAL/H
SYSTEM : PRESS [>]
FUNCTION : PRESS [>]
Q1 A1 2HF S
  
```

```

FUNCTION : PRESS [>]
  
```

Press the ◀ or ▶ button until FUNCTION appears.

Position the cursor to FUNCTION by pressing the ◀ or ▶ button.

Continue to next page →

Making Variations of Printouts (continued)

- 6 Press the \diamond button.
The FUNCTION SETUP menu appears.

```

FUNCTION SETUP COLOR: nnn
PRN SETUP :PRESS [X]
AUTO LIVE :OFF/ON
IMMED CAP :OFF/ON
RM2 FUNC  :PRINT/
CLEAR     :/OFF
Q1 A1      2HF      S
  
```

FUNCTION SETUP

- 7 Select AUTO LIVE by pressing the \diamond or \triangleright button.

```

FUNCTION SETUP COLOR: nnn
PRN SETUP :PRESS [X]
AUTO LIVE :OFF/ON
IMMED CAP :OFF/ON
RM2 FUNC  :PRINT/
CLEAR     :/OFF
Q1 A1      2HF      S
  
```

AUTO LIVE : OFF/on

Press the \diamond or \triangleright button until AUTO LIVE appears.

Position the cursor to AUTO LIVE
by pressing the \diamond or \triangleright button.

- 8 Select which the image appears on the video monitor after the image is captured by pressing the \diamond or \triangleright button.

When you select	Setting
The image captured in memory appears just after the printer captures the image, and the memory image remains on the video monitor screen.	OFF
The image stored in memory appears just after the printer captures the image, then after a few seconds, the source memory appears, whenever you press the CAPTURE button.	ON

```

FUNCTION SETUP COLOR: nnn
PRN SETUP :PRESS [X]
AUTO LIVE :OFF/ON
IMMED CAP :OFF/ON
RM2 FUNC  :PRINT/
CLEAR     :/OFF
Q1 A1      2HF      S
  
```

AUTO LIVE : OFF/on

Display the desired mode in capital letters by
pressing the \diamond or \triangleright button.

Switch the desired mode to green by pressing
the \diamond or \triangleright button.

- 9 Press the MENU button.
The regular screen appears.

To return to the PRINTER SETUP menu

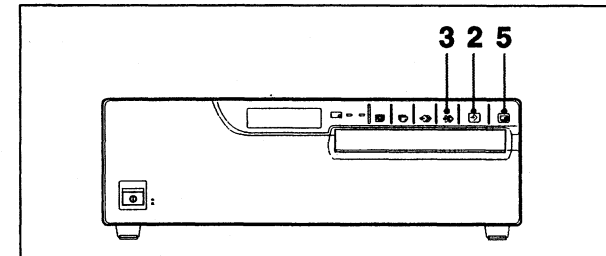
In step 9, position the cursor to PRN SETUP and press the \diamond button.
The PRINTER SETUP menu appears again.

Making a Printout with Multiple Reduced Images

This subsection explains how to make printouts of multiple reduced images taking, as an example, the making of a printout of four reduced images.

Before making the printout of four reduced images

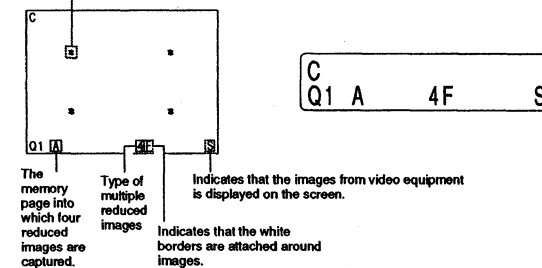
- Select the type of the four-reduced image and whether to put the white borders "I". (see page 32)
 - Select the appropriate memory page. (see page 31)
 - Set how to capture images into the memory page and select which image will appear after the image has been stored into memory, the memory image or source image. (see page 36)
- a) When the type of four reduced images or 16 reduced images is selected, the frame mode is automatically selected.



- 1 Start the video source.

This operation is done using the controls of the video equipment acting as the source.

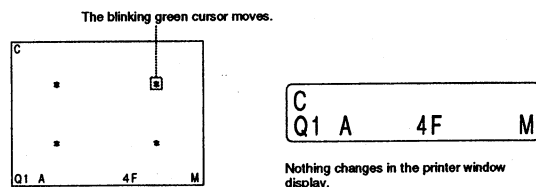
Blinks green to indicate that an image will
be captured here.



Continue to next page →

Making Variations of Printouts (continued)

- 2** Press the CAPTURE button at the instant the image you want to print appears on the screen.
The image has been stored to the star (*) that blinked green on the video monitor screen or the position number displayed on the printer window display in step 1.
The green blinking star (referred to as the cursor) on the monitor moves to the next position and the number the printer window display advances by 1.



At this time, the image captured in memory is displayed on the video monitor screen. However, the image to be displayed after a few seconds depends on the setting of AUTO LIVE in the FUNCTION SETUP menu. (see page 38)

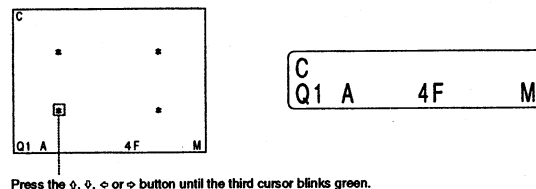
Go to step 3 when the memory image remains on the video monitor screen.
Go to step 4 when the source image is displayed.

- 3** Press the SOURCE/MEMORY button.
The source image appears on the video monitor screen.
- 4** Repeat steps 2 and 3 until you have captured four images when the memory image remains on the video monitor screen.
Repeat step 2 until you have captured four images when the source image appears on the video monitor screen.

To replace a captured image

Example: When you want to change the image stored to the third position.

- ① Select the third position where there is the image which you want to replace by pressing the \uparrow , \downarrow , \leftarrow or \rightarrow button.
Pressing the \uparrow , \downarrow , \leftarrow or \rightarrow button moves the cursor one position vertically or horizontally.



- ② Start the video source.
If the memory image is displayed, press the SOURCE/MEMORY button to display the source image.
- ③ Press the CAPTURE button at the instant the image you want to print appears.
The previously stored image is replaced with the newly stored image.

To skip a previously captured image

When an image has already been captured, the previously captured image can be replaced by pressing the CAPTURE button.
Skip the corresponding image by pressing the \uparrow , \downarrow , \leftarrow or \rightarrow button.

To capture images automatically

Images can be stored in all of the memory pages according to setting made for INTERVAL of the PRINTER SETUP menu to ON. (see page 36)

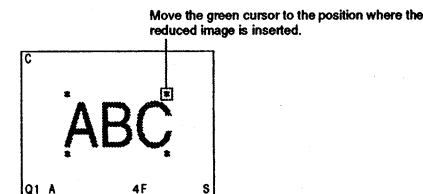
- 5** Press the PRINT button.
The four reduced images are printed on one sheet of paper.

Making a printout with an Insert

You can make printouts with an insert which is reduced image.
Example: To make a printout with one of four reduced images inserted.
The operation to make a printout with one of 16 reduced images is the same.

- 1** Display the full-size image stored in memory. (Follow steps 1 to 3 of "Making Full-Size Printouts" on page 16.)
- 2** Set the multiple reduced image type to 4 (without white borders).
(See "Selecting the number of reduced images to be captured in memory" on page 32.)
- 3** Capture the image to be inserted.

- ① Select the position where a reduced image is to be inserted by pressing the \uparrow , \downarrow , \leftarrow or \rightarrow button.



- ② Press the CAPTURE button at the instant the image you want to insert appears.
The image is captured to the position selected in step ①.
- 4** Press the MULTI PICTURE button.
The full-size image with an insert appears on the video monitor.
- 5** Press the PRINT button.
The image with an insert is printed.

Making Variations of Printouts (continued)

Making Printouts for Stickers

The unit supports application modes such as STICK DUP or STICK DIF that allows you to make a printout for a sticker.

- STICK DUP application mode allows you to make a printout with four or 16 identical reduced images.
- STICK DIF application mode allows you to make a printout with four or 16 different reduced images.

For details of how to select the STICK DUP or STICK DIF application mode, see "Selecting the Printer Application Mode" on page 25.

Also, you have to use the following ink ribbon cartridge and paper for stickers

- UPC-20S16E print pack for sticker with 16 reduced images
- UPC-20S04E print pack for sticker with four reduced images

For detailed information on the print pack, see "Ink Ribbon Cartridge and Paper" on page 99.

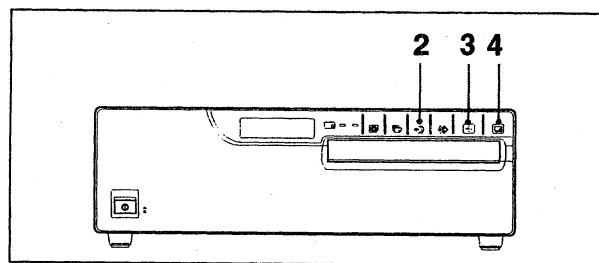
Before making a printout for a sticker

- Select either the STICK DUP or STICK DIF application mode (see page 25)
- Select the type of the multiple reduced images, that is 4 or 16 (see page 32).
The procedure for selecting the number of reduced images is the same as that in standard application mode.
However, in the LAYOUT SETUP menu it is different. You cannot select the MEMORY mode, and SEPARATE is automatically set and fixed to the one with white borders.
- Select the appropriate memory page. (see page 31)

About the memory mode

You are not allowed to select the memory mode. The memory mode is automatically set to either frame or field.

To make a printout for a sticker, proceed as follows.



- 1 Start the video source.
This operation is done using the controls of the video equipment acting as the source.

- 2 Select the memory page by pressing the MEMORY PAGE button.

- 3 Capture the image in memory.
When STICK DIF 4 or STICK DIF 16 is selected: Press the CAPTURE button at the instant the image you want to print appears on the screen. Repeatedly capture the remaining images by pressing the CAPTURE button.
When STICK DUP 4 or STICK DUP 16 is selected: Press the CAPTURE button at the instant the image you want to print appears on the screen. The full-size memory image is displayed on the video monitor screen. Four or 16 reduced images will be printed on one sheet of paper.

- 4 Press the PRINT button.
The multiple reduced images are printed on one sheet of sticker paper.

Making Printouts for Identification Photographs

The unit supports the application modes such as FLEX IPP and FIX IPP that allow you to make a printout for identification photographs.

- FLEX IPP application mode allows you to make a printout with identical images of the desired size. The number of identical images is automatically calculated according to the size that you have set.
- FIXED IPP application mode allows you to make a printout with a full-size image, or identical multiple reduced images.^{a)}

^{a)} The number of reduced images depends on your TV system. (see page 49)

About printing pack and paper tray

To make printouts for identification photographs in FILL IPP or FIXED IPP mode, it is recommended to use the UPC-2040A Self-Laminating Color Printing Pack (not supplied) specially designed for this mode. The printout of this type paper is well preserved.

Also, the paper size of this type is a little larger than that of others. Thus, the supplied paper tray is too small to load paper.

The UPA-2002 (not supplied) is required.

For detailed information, contact your Sony dealer.

Making printouts for identification photographs of a desired size

The FLEX IPP application mode allows you to select the size of one image. The number of images in a single printout depends on the set size. This section explains how to set the size and register it to the LOAD SIZE number.

Continue to next page →

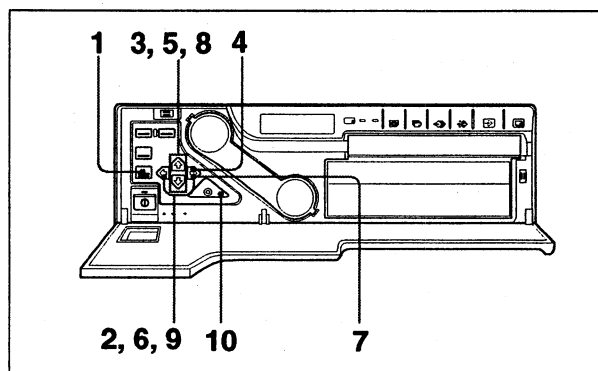
Making Variations of Printouts (continued)

■ To decide the size

The sizes can be registered as LOAD SIZE number 1, 2 and 3. The printer retains these sizes even if you turn off the printer power. Once you have set the typical size of the photograph, you can make the identification photograph with the desired size very easily.

Before starting

Set the application mode to FLEX IPP. (see page 25)



- 1 Press the MENU button.
The menu just before opened appears.
- 2 Select LAY by pressing the \diamond or \triangleright button.

```
LAYOUTSETUP COLOR : nnn
/CO/ LAY/ PRN/ IN/OUT/
MEMORY : FRAME/ FIELD
MULTI PIX : 1/2H/2/4/16
SEPARATE : OFF/ ON
WINDOW : PRESS [ > ]
CAPTION : PRESS [ > ]

Q1 A1      2HF      S
```

By switching LAY to green by pressing the \diamond or \triangleright button, LAYOUT SETUP appears.

```
LAYOUTSETUP
/c/LAY/p/i/o/
```

Display LAY in capital letters by pressing the \diamond or \triangleright button.

- 3 Select WINDOW by pressing the \diamond or \triangleright button.

```
LAYOUT SETUP COLOR : nnn
/CO/ LAY/ PRN/ IN/OUT/
MEMORY : FRAME/ FIELD
MULTI PIX : 1/2H/2/4/16
SEPARATE : OFF/ ON
WINDOW : PRESS [ > ]
CAPTION : PRESS [ > ]

Q1 A1      2*2      S
```

Position the cursor to WINDOW by pressing the \diamond or \triangleright button.

```
WINDOW :
PRESS [ > ]
```

Press the \diamond or \triangleright button until WINDOW appears.

- 4 Press the \diamond button.
The WINDOW SETUP menu appears.

```
WINDOW SETUP COLOR: nnn
LAY SETUP : PRESS [ > ]
LOAD SIZE : 1/2/3
H WIDTH : 035mm
V WIDTH : 045mm
SAVE SIZE : 1/2/3 [ EXEC ]

Q1 A 2*2      S
```

```
WINDOW SETUP
```

- 5 Select LOAD SIZE by pressing the \diamond or \triangleright button.

```
WINDOW SETUP COLOR: nnn
LAY SETUP : PRESS [ > ]
LOAD SIZE : 1/2/3
H WIDTH : 035mm
V WIDTH : 045mm
SAVE SIZE : 1/2/3 [ EXEC ]

Q1 A 2*2      S
```

Position the cursor to LOAD SIZE by pressing the \diamond or \triangleright button.

```
LOAD SIZE :
1/-/-
```

Press the \diamond or \triangleright button until LOAD SIZE appears.

- 6 Select the desired LOAD SIZE number to be registered or modified by pressing the \diamond or \triangleright button.

```
WINDOW SETUP COLOR: nnn
LAY SETUP : PRESS [ > ]
LOAD SIZE : 1/2/3
H WIDTH : 035mm
V WIDTH : 045mm
SAVE SIZE : 1/2/3 [ EXEC ]

Q1 A 2*2      S
```

Switch the desired LOAD SIZE number to green by pressing the \diamond or \triangleright button.

```
LOAD SIZE :
1/-/-
```

Display the desired LOAD SIZE number by pressing the \diamond or \triangleright button.

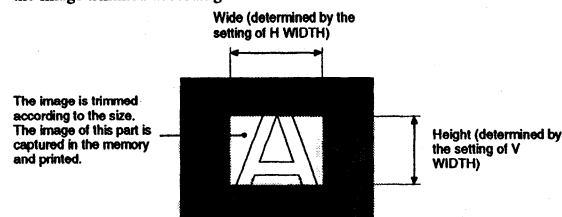
When modifying, you can preserve the original settings. (See "To retain the originally set value" on page 47.)

Continue to next page \rightarrow

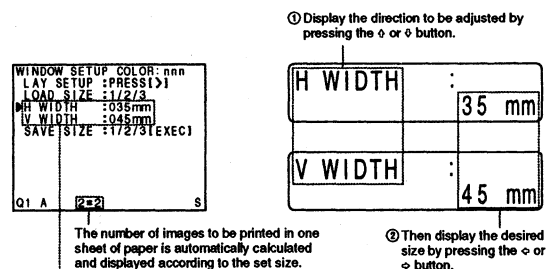
Making Variations of Printouts (continued)

7 Decide the size.

Display the source image on the video monitor and decide the size as watching the image trimmed according to the size.



- ① Select the direction to be adjusted by pressing the \diamond or ∇ button.
- ② Adjust the size of the direction selected in ① by pressing the \leftarrow or \rightarrow button.



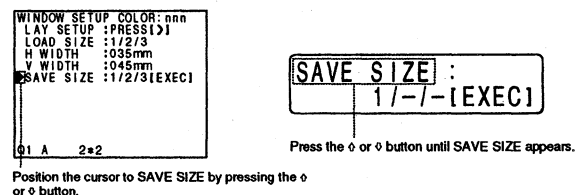
The number of images to be printed in one sheet of paper is automatically calculated and displayed according to the set size.

- ① Position the cursor to the direction to be adjusted by pressing the \diamond or ∇ button, then
- ② adjust the size by pressing the \leftarrow or \rightarrow button.

The following table shows examples of the size and the number of images in a single printout.

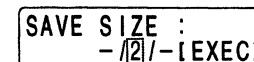
Size (unit: mm) (w x h)	Number of Images
35 x 45	4
45 x 35	3
51 x 51	2

8 Select SAVE SIZE by pressing the \diamond or ∇ button.



Position the cursor to SAVE SIZE by pressing the \diamond or ∇ button.

9 Select the SAVE SIZE number to which new settings are to be stored by pressing the \leftarrow or \rightarrow button.



Display the desired SAVE SIZE number by pressing the \leftarrow or \rightarrow button.

Switch the desired SAVE SIZE number to green by pressing the \leftarrow or \rightarrow button.

To retain the originally set value

Select a SAVE SIZE number which is different from the LOAD SIZE number selected in step 6.

10 Press the EXEC button.

The set size is registered to the SAVE SIZE number selected in step 9.

To return to the previous screen

Select the LAYOUT SETUP by pressing the \diamond or ∇ button, then press the or \rightarrow button.

The LAYOUT SETUP menu appears.

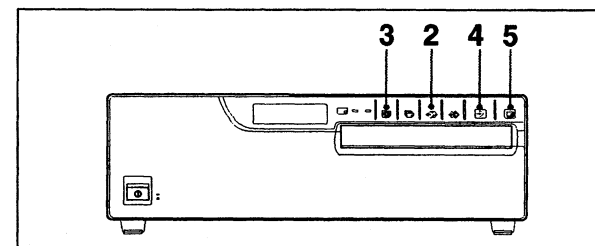
To return to the regular screen

Press the MENU button.

■ To make a printout with identical images of the desired size

Before making printouts with identical images of the desired size

- Select the application mode FLEX IPP. (page 25)
- Decide the size of one image. (page 44)
- Prepare the UPC-2040A Self-Laminating Printing Pack



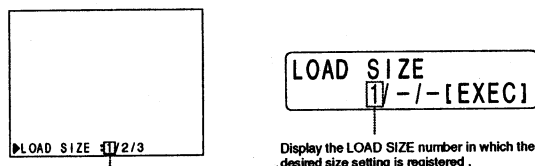
1 Start the video source.

This operation is done using the controls of the video equipment acting as the source.

Continue to next page \rightarrow

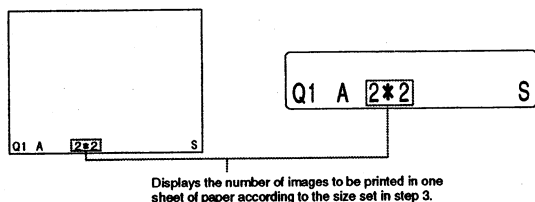
Making Variations of Printouts (continued)

- 2 Select the memory page by pressing the MEMORY PAGE button.
- 3 Load the desired size by pressing the MULTI PICTURE button.
By pressing the MULTI PICTURE button, ►LOAD SIZE: 1/2/3 appears.
Each time you press the MULTI PICTURE button, the LOAD SIZE number to be loaded changes.



Change the LOAD SIZE number in which the desired size setting is registered green.

►LOAD SIZE: 1/2/3 disappears after a few seconds if you do not perform any operation.



When you want to make a printout of images of the different size
Set the size in step 3 instead of loading the LOAD SIZE number. (See "To decide the size" on page 44.)

- 4 Press the CAPTURE button at the instant the image you want to print appears on the screen.
The number of images corresponding to the selected size are copied and captured in the selected memory page.

To replace a stored image

- ① When the memory image remains on the video monitor screen, press the SOURCE/MEMORY button to display the source image.
- ② Press the CAPTURE button at the instant the image you want to print appears.
The previously copied identical images are replaced with the newly captured copied images.
- 5 Press the PRINT button.
The identical reduced images of the same size are printed in a single printout.

Making printouts for identification photograph with the fixed-size image

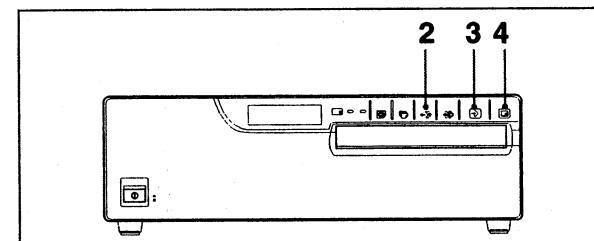
The printer allows you to make a printout with a full-size image, identical multiple reduced images in FIXED IPP application mode.

You can select the number of identical reduced images on the menu on the LAYOUT SETUP menu, but the number of reduced images depends on your TV system.

- PAL TV system: FIXED IPP 1/4/9/16 are selectable.
- NTSC TV system: FIXED IPP 1/4/16 are selectable.

Before making printouts for identification photograph with the fixed-size image

- Select the application mode FIXED IPP. (page 25)
- Decide the number of images. (page 32)
- Prepare the UPC-2040A Self-Laminating Printing Pack



- 1 Start the video source.
This operation is done using the controls of the video equipment acting as the source.
- 2 Select the memory page by pressing the MEMORY PAGE button.
- 3 Press the CAPTURE button at the instant the image you want to print appears on the screen.

To replace a stored image
① When the memory image remains on the video monitor screen, press the SOURCE/MEMORY button to display the source image.
② Press the CAPTURE button at the instant the image you want to print appears.
The previously copied identical images are replaced with the newly captured copied images.
- 4 Press the PRINT button.
The identical reduced images of the same size are printed in a single printout.

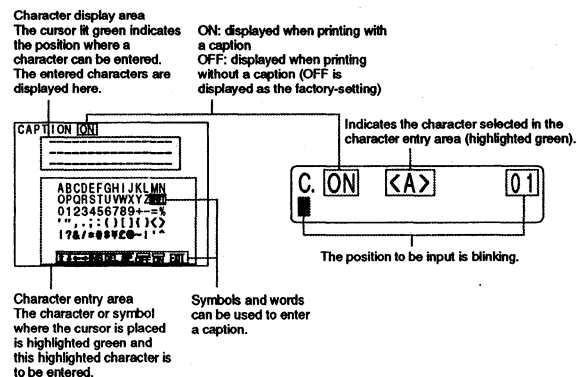
Making Printouts With a Caption

A caption, such as data or comments, can be added to a printout below the image. You can input up to 48 characters.

About the CAPTION menu

A caption is entered from the CAPTION menu. You can input caption in any printer application mode and make a printout with a caption.

A brief explanation of each item of the CAPTION menu is given below.



Symbols and words can be used to enter a caption

Monitor display	Function
ins	Inserts one character without erasing the highlighted character.
del	Deletes a highlighted character and characters back by one.
spc	Puts one space at the position of the highlighted character as erasing that character. One space is left.
off	Selects to print without a caption.
on	Selects to print with a caption.
exit	Returns from the CAPTION menu to LAYOUT SETUP menu.
Sft ^{a)}	Selects either capital letters or lower-case letters.

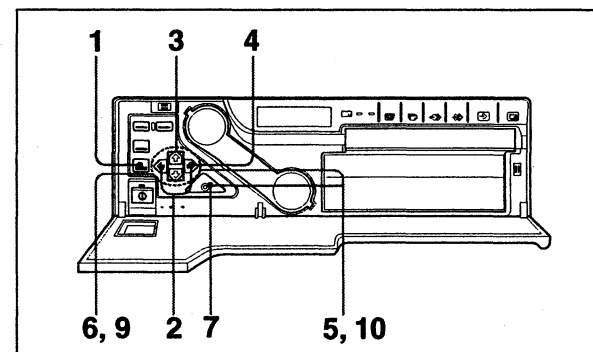
a) By highlighting Sft green and pressing the EXEC button, capital letters are changed to lower-case letters, or lower-case letters are changed to capital letters in the character entry area.

Entering a Caption

Enter a caption as follows. The setting remains effective until you enter a new setting - even if you turn the power off.

Notes

- If you turn off the power of the printer without returning to the LAYOUT SETUP menu or regular screen, the entered characters are cleared.
- During printing, you cannot enter or edit caption in the CAPTION menu.



- 1 Press the MENU button.
The menu just before opened appears.
- 2 Select LAY by pressing the \diamond or \triangleright button.

```
LAYOUTSETUP COLOR nnn
▶ / CO / LAY / PRN / IN / OUT /
MEMORY : FRAME / FIELD
MULTI PIX : 1 / 2H / 2 / 4 / 16
SEPARATE : OFF / ON
WINDOW : PRESS [ > ]
CAPTION : PRESS [ > ]

Q1 A1 2HF S
```

By switching LAY to green by pressing the \diamond or \triangleright button, LAYOUT SETUP appears.

```
LAYOUTSETUP
/c / LAY / P / i / o /
```

Display LAY in capital letters by pressing the \diamond or \triangleright button.

Continue to next page →

Making Printouts With a Caption (continued)

- 3 Select CAPTION by pressing the Δ or ∇ button.

```
LAYOUT SETUP COLOR
/ COL / LAY / PRN / IN / OUT /
MEMORY : FRAME / FIELD
MULTI PIX : 1/2M/2/4/16
SEPARATE : OFF / ON
WINDOW : PRESS [ > ]
CAPTION : PRESS [ > ]

01 A1 2HF S
```

Position the cursor to CAPTION by pressing the Δ or ∇ button.

```
CAPTION :
PRESS [ > ]
```

Press the Δ or ∇ button until CAPTION appears.

- 4 Press the \rightarrow button.
The CAPTION menu appears.

- 5 Position the cursor (the line lit green) to the point where you want to enter the character in the character display area.

To move the cursor:

- Select the arrow corresponding to the direction in which you want to move the green cursor in the character display area, by pressing the Δ , ∇ , \rightarrow or \leftarrow button.
- Press the EXEC button.
Each time you press the EXEC button, the cursor moves one position in the designated direction.

Example: Move the cursor to the left by two.

The cursor is currently positioned here.

```
CAPTION ON
_____
ABCDEF GHI JKLMN
OPQRST UVWXYZ
0123456789+-=%
'":;(){}[]<>
!@/`~#~$%&-1'^
```

① Display LEFT.

```
C. ON <LEFT> 03
```

The cursor is currently positioned here.

- Highlight the \rightarrow button green.
- Press the EXEC button twice.

The cursor moves to this position.

```
CAPTION ON
_____
ABCDEF GHI JKLMN
OPQRST UVWXYZ
0123456789+-=%
'":;(){}[]<>
!@/`~#~$%&-1'^
```

```
C. ON <A> 01
```

The cursor moves to this position.

Note

When OFF is displayed, the CAPTION input mode is set to off. Thus, you cannot add a caption to the printouts. ("Making printouts with a caption" on page 55)

- 6 Select the character you want to enter by pressing the Δ , ∇ , \rightarrow or \leftarrow button.

Example: To enter S

```
CAPTION ON
_____
ABCDEF GHI JKLMN
OPQRST UVWXYZ
0123456789+-=%
'":;(){}[]<>
!@/`~#~$%&-1'^
```

Display S by pressing the Δ , ∇ , \rightarrow or \leftarrow button.

```
C. ON <S> 01
```

Highlight S green by pressing the Δ , ∇ , \rightarrow or \leftarrow button.

- 7 Press the EXEC button.
The character selected in step 5 appears at the point where the green cursor is positioned in the character display area, after which the cursor moves to the next position.

The cursor moves to this position.

```
CAPTION ON
S_____
ABCDEF GHI JKLMN
OPQRST UVWXYZ
0123456789+-=%
'":;(){}[]<>
!@/`~#~$%&-1'^
```

The cursor moves to this position.

```
C. ON <S> 02
```

When you enter the wrong character

- Select \leftarrow by pressing the Δ , ∇ , \rightarrow or \leftarrow button, then press the EXEC button.
The cursor moves back by one and the character entered in step 6 is highlighted green.
- Select DEL by pressing the Δ , ∇ , \rightarrow or \leftarrow button.

```
CAPTION ON
S_____
ABCDEF GHI JKLMN
OPQRST UVWXYZ
0123456789+-=%
'":;(){}[]<>
!@/`~#~$%&-1'^
```

```
C. ON <DEL> 02
```

Display DEL by pressing the Δ , ∇ , \rightarrow or \leftarrow button.

Switch DEL to green by pressing the Δ , ∇ , \rightarrow or \leftarrow button.

- Press the EXEC button.
The character selected in ① is deleted.
When the character to be deleted is placed among entered characters, the characters back by one.

Note

A dark change of the monitor screen may occur after the EXEC button is pressed.

- 8 Repeat steps 5, 6 and 7 to enter the remaining characters of the caption.

Continue to next page \rightarrow

Making Printouts With a Caption (continued)

To enter a space

- ① Position the green cursor to the point where you want to enter a space by performing the operations explained in step 5.
- ② Select SPC by pressing the \diamond , \diamond , \diamond or \diamond button.
- ③ Press the EXEC button.

A single space is entered and the green cursor moves to the next position. If there is a character at the position where the space is entered, that character is deleted and a single space is left.

To replace a previously entered character without changing the number of characters

You can replace a previously entered character with a new one.

- ① Position the green cursor to the character to be replaced by performing the operations explained in step 5.
- ② Overwrite the invalid character with the correct character by performing the operations explained in steps 6 and 7.

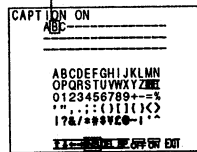
The previously entered character is replaced with the new one.

To add characters midway

- ① Position the cursor to the position where a character is to be added by performing the operations explained in step 5.

Example: To Add a character between B and C

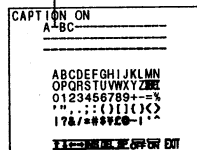
- ① Move the cursor to B
(B is highlighted green).



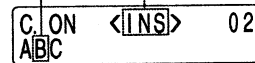
- ② Switch INS to green

- ② Select INS by pressing the \diamond , \diamond , \diamond or \diamond button.

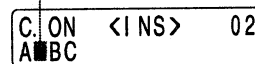
Cursor (lit green)



- ① B blinks when the cursor comes to B. ② Display INS.



Cursor (blinking)



- ③ Press the EXEC button.

A single space is inserted between B and C and the green cursor is positioned at the space.

Note

A dark change of the monitor screen may occur after the EXEC button is pressed.

- ④ Enter the character to be added.

- ⑨ Select EXIT by pressing the \diamond , \diamond , \diamond or \diamond button.

- ⑩ Press the EXEC button.

The entered characters are stored in the memory. The LAYOUT SETUP menu appears.

To return to the regular screen

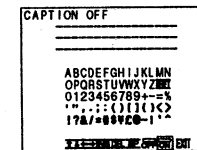
Press the MENU button in step 9. The entered characters are stored in the memory and the regular screen appears.

Making printouts with a caption

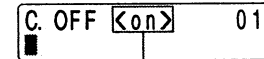
- ① Display the CAPTION menu.

For details of how to display the CAPTION menu, see steps 1 to 4 in "Entering a Caption".

- ② Select on by pressing the \diamond , \diamond , \diamond or \diamond button.



Switch on to green by pressing the \diamond , \diamond , \diamond or \diamond button.



Display on by pressing the \diamond , \diamond , \diamond or \diamond button.

- ③ Press the EXEC button.

- ④ Select EXIT by pressing the \diamond , \diamond , \diamond or \diamond button.

- ⑤ Press the EXEC button.

After this, all printouts are made with a caption.

To make a printout without a caption

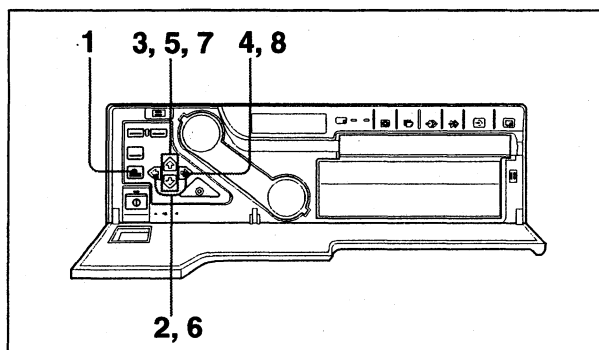
Select off in step 2.

Deleting the Images Stored to Memory Pages

You can delete images captured to memory pages, from either all of memory pages or a single memory page, by using the CLEAR button.

Whether images of all memory pages or single memory page are deleted depends on the setting of CLEAR on the FUNCTION SETUP menu.

Setting the Function of the CLEAR Button



- 1** Press the MENU button.
The menu just before opened appears.

- 2** Select PRN by pressing the ◀ or ▶ button.

```

PRINTER SETUP COLOR nnn
▶/COL/LAY/PRN/IN/OUT/
PRINT QTY : 9 [1-9]
INTERVAL : OFF/ON
GAMMA : S/NORMAL/H
SYSTEM : PRESS[>]
FUNCTION : PRESS[>]
Q1 A1 2HF S
  
```

By switching PRN to green by pressing the ◀ or ▶ button, PRINTER SETUP appears.

```

PRINTER SETUP
/c/l/PRN/i/o/
  
```

Display PRN in capital letters by pressing the ◀ or ▶ button.

- 3** Select FUNCTION by pressing the ◀ or ▶ button.

```

FUNCTION SETUP COLOR nnn
/CO/LAY/PRN/IN/OUT/
PRINT QTY : 9 [1-9]
INTERVAL : OFF/ON
GAMMA : S/NORMAL/H
SYSTEM : PRESS[>]
FUNCTION : PRESS[>]
Q1 A1 2HF S
  
```

Position the cursor to FUNCTION by pressing the ◀ or ▶ button.

```

FUNCTION :
PRESS[>]
  
```

Press the ◀ or ▶ button until FUNCTION appears.

- 4** Press the ◀ button.
The FUNCTION SETUP menu appears.

```

FUNCTION SETUP COLOR nnn
PRN SETUP : PRESS[>]
▶AUTO LIVE : OFF/ON
IMMED.CAP. : OFF/ON
RM2 FUNC : PRINT/
CLEAR : ALL/
Q1 A1 2HF S
  
```

FUNCTION SETUP

- 5** Select CLEAR by pressing the ◀ or ▶ button.

```

FUNCTION SETUP COLOR nnn
PRN SETUP : PRESS[>]
AUTO LIVE : OFF/ON
IMMED.CAP. : OFF/ON
RM2 FUNC : PRINT/
▶CLEAR : ALL/
Q1 A1 2HF S
  
```

```

CLEAR :
ALL/ PaGe/off
  
```

Press the ◀ or ▶ button until CLEAR appears.

Position the cursor to CLEAR by pressing the ◀ or ▶ button.

- 6** Select the function of the CLEAR button by pressing the ◀ or ▶ button.

```

FUNCTION SETUP COLOR nnn
PRN SETUP : PRESS[>]
AUTO LIVE : OFF/ON
IMMED.CAP. : OFF/ON
RM2 FUNC : PRINT/
▶CLEAR : ALL/
Q1 A1 2HF S
  
```

```

CLEAR :
ALL/ PaGe/off
  
```

Display the desired function in capital letters by pressing the ◀ or ▶ button.

Switch the desired function to green by pressing the ◀ or ▶ button.

Function of the CLEAR button	Settings
To deactivate the CLEAR button	OFF
To delete images of all memory pages	ALL
To delete images of a single memory page	PAGE

Continue to next page →

Deleting the Images Stored to Memory Pages (continued)

- 7 Select PRN SETUP by pressing the \diamond or ∇ button.

```

FUNCTION SETUP COLOR nnn
PRN SETUP : PRESS(1>)
AUTO LIVE : OFF/ON
IMMED. CAP. : OFF/ON
RM2 FUNC : PRINT/
CLEAR : ALL/
01 A1 2HF S
  
```

Position the cursor to PRN SETUP by pressing the \diamond or ∇ button.

SYSTEM SETUP

Press the \diamond or ∇ button until PRN SETUP appears.

- 8 Press the \diamond button.
The PRINTER SETUP menu appears.
Once you set the function of the CLEAR button, the CLEAR button functions according to the setting until the function setting is changed.

To return to the regular screen
Press the MENU button.

Deleting Images

You can delete images captured to memory pages, either from all memory pages or a single memory pages.

If the source image is displayed on the video monitor, press the CLEAR button once so that the memory image will be displayed.

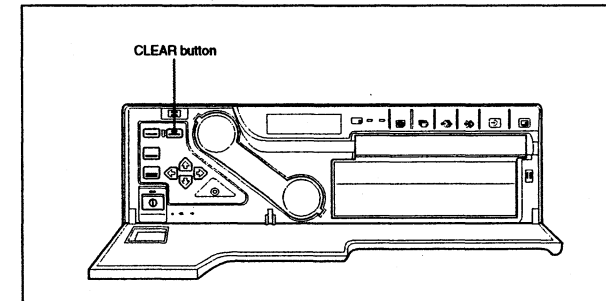
Deleting Images in all memory pages simultaneously

Before deleting images in all memory pages

Set CLEAR to ALL on the FUNCTION SETUP menu.

Note

You cannot restore images once they have been deleted.



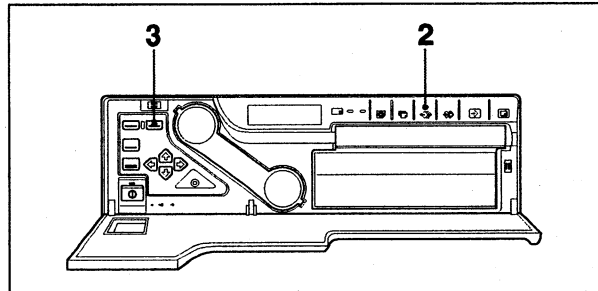
Press the CLEAR button.
All images stored in the printer are cleared.

Deleting the Images Stored to Memory Pages (continued)

Deleting Images in a certain memory page

Before deleting images

Set CLEAR to PAGE on the FUNCTION SETUP menu.

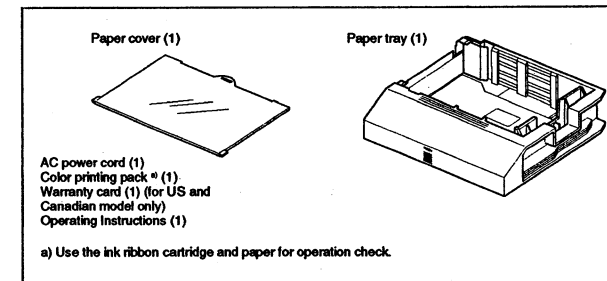


- 1** Press the SOURCE/MEMORY button when the source image is displayed on the video monitor screen.
The image stored in memory is displayed on the screen.
- 2** Select the memory page from which images are to be deleted by pressing the MEMORY PAGE button.
- 3** Press the CLEAR button.
The image in the memory page selected in the step 2 is deleted.

Installation and Adjustment

Supplied Accessories

The printer is packed together with the following accessories. Check that nothing is missing from your package.



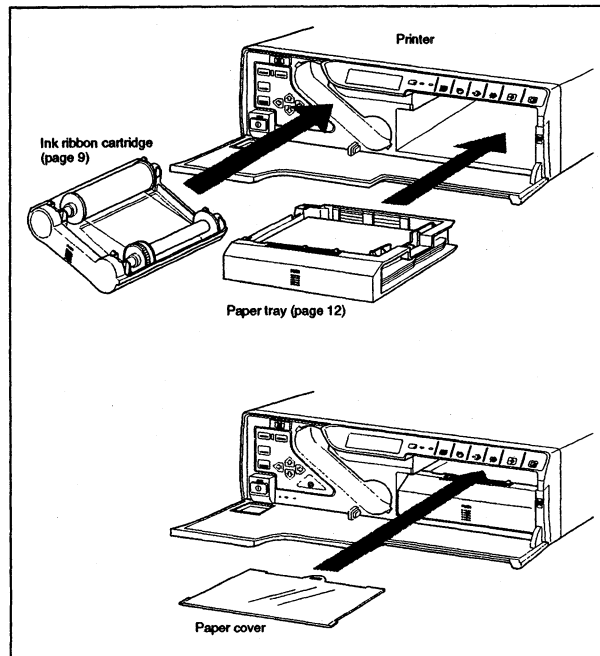
Notes

- Retain the original carton and packing materials in case you have to transport the unit in the future.
- Remove the ink ribbon cartridge and paper tray when transporting the printer.

Supplied Accessories (continued)

Assembly

Attach the supplied paper cover, paper tray and ink ribbon cartridge to the printer. For details of how to assemble them, see the pages given in parentheses.



Preparing the Remote Control Unit

The following remote control units (not supplied) allow you to control the printer remotely.

- RM-5500 Remote Control Unit: Used to connect to the REMOTE 1 connector
- RM-91 Remote Control Unit, FS-20/36 Foot switch: Used to connect to the REMOTE 2 connector.

The operations to be remotely controlled by the above remote control units depend on the remote operation settings made with the FUNCTION SETUP menu. ("Selecting the Operating Mode for Automatic Printing Capabilities" page 85)

Using the RM-5500 remote control unit (not supplied)

The RM-5500 Remote Control Unit can be used either as a wireless type or wired type. The buttons on the remote control unit duplicate those on the front panel of the printer. (see "Front" page 108 and "Sub Panel" page 110)

You can use the remote control unit's buttons which have the same name as the one on the printer.

Inserting batteries

Install the batteries in the remote control unit before using it.

- 1 Remove the battery compartment cover.
- 2 Insert the two R6 (size AA) 1.5 V batteries.
Note the polarity. Be careful to insert the batteries correctly.
- 3 Replace the cover.

Battery life

The battery life depends on how much you use the remote control unit. Install fresh batteries as soon as you notice the unit's range becoming shorter.

Notes

When using the batteries:

- Remove the batteries from the remote control unit if you do not intend to use it for an extended period of time. The batteries may leak if you leave them in the remote control unit.
- Should the batteries leak, clean the battery case thoroughly with a soft cloth and install fresh batteries.
- Be careful to insert the batteries correctly. Note the polarity, as indicated inside the battery compartment.
- Replace exhausted batteries with fresh ones. Never mix a fresh battery with a used battery or with a different kind of battery.

Supplied Accessories (continued)

Using the RM-5500 remote control unit (not supplied) as a wireless unit

When using the remote control unit as a wireless unit, aim the head of the remote control unit at the remote sensor on the printer. With fresh batteries, the range of the remote control unit is about 3 meters.

Using the RM-91/FS-20/36

The operation of the RM-91 Remote Control Unit (not supplied) and FS-20 Foot Switch (not supplied) can be controlled remotely by sending a pulse signal to the REMOTE 2 connector in addition to the remote operation setting on the FUNCTION SETUP menu.

FS-36 (not supplied) has three switches that have different functions.

For detailed information on how to use those switches, refer to the manual supplied with the FS-36.

Connections

To enable printing, video equipment to act as an input signal source, and a video monitor to display images or menus must be connected.

The following diagrams illustrate how to make the input, output and remote control connections. Use this as a guide when connecting the necessary signals to and from the equipment to be used for printing.

Notes

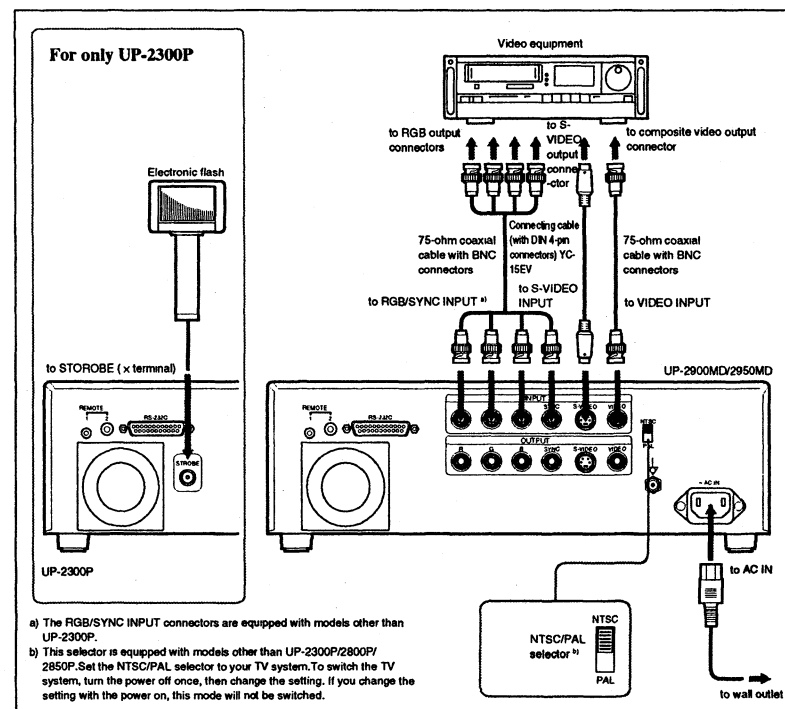
- Turn off the power of each device before attempting to make any connections.
- Connect the AC power cord last.

Making Connections for Storing Video Images

Connect the video equipment providing the video images to be printed.

Connect the video equipment which will be used in actual printing, using the following diagram as a guide.

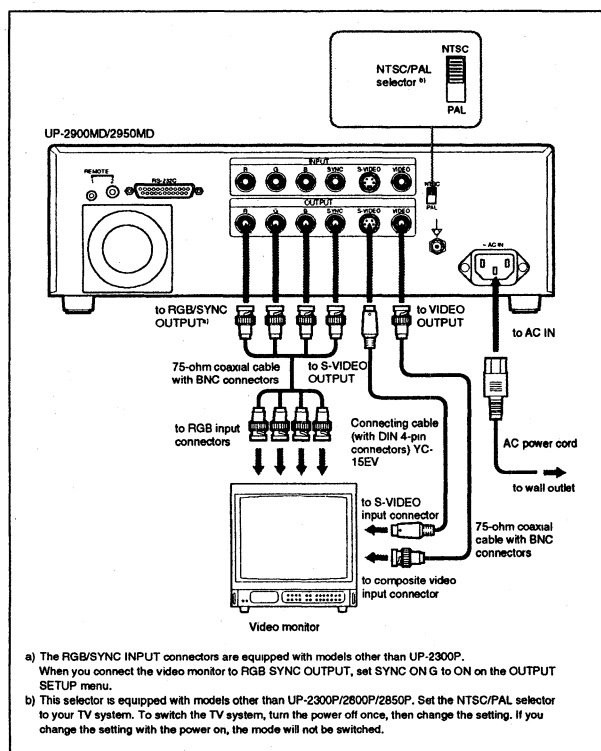
Before connecting the video equipment, see "Important safeguards/notices for use in the medical environment" on page 2.



Connections (continued)

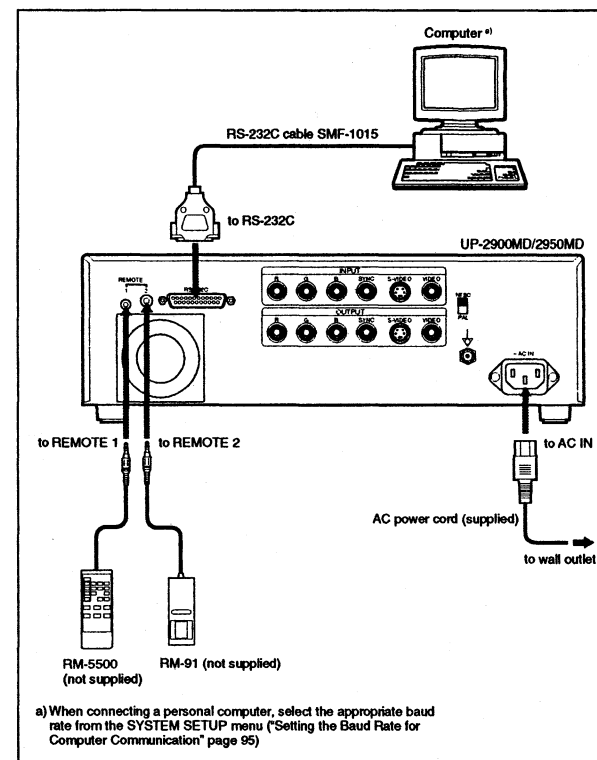
Making Connections for Viewing Images to be Printed

Connect a video monitor to view stored images and to check those to be printed. Connect the necessary video monitor which will be used in actual printing, using the following diagram as a guide. Before connecting the video equipment, see "Important safeguards/notices for use in the medical environment" on page 2.



Making Connections to Enable Remote Control

The printer can be controlled remotely by connecting the RM-5500 Remote Control Unit (not supplied), RM-91 Remote Control Unit (not supplied), the FS-20/36 Foot Switch (not supplied) or the personal computer.



Setting Up the Printer

You can set up the printer specification. Once you have adjusted and stored, the printer operates according to the setting until those values are modified. You can set up the printer according to the intended purpose, connected equipment or your individual preferences.

Menu	Functions to be set	Reference page
COLOR ADJUST SETUP	Adjusting the printout color (color intensity and contrast) and sharpness.	75
LAYOUT SETUP	<ul style="list-style-type: none"> • Selecting the memory mode • Selecting the type of printouts • Selecting whether white borders are added to multiple reduced images. 	29 32 34
CAPTION a)	Entering a caption	51
WINDOW SETUP ^{a)}	<ul style="list-style-type: none"> • Setting the size of one image. • Changing the printout size/printout area. 	44 82
PRINTER SETUP	<ul style="list-style-type: none"> • Setting the print quantity • Selecting whether multiple reduced images are automatically stored at regular intervals. • Adjusting the tone of printout 	19 37 80
SYSTEM SETUP ^{b)}	<ul style="list-style-type: none"> • Adjusting the brightness of the printer window display. • Setting the baud rate for computer communication. • Selecting whether the operation and error tones sound. • Selecting the application mode (printer operation mode) 	91 95 93 25
FUNCTION SETUP	<ul style="list-style-type: none"> • Selecting the image which appears after storing the image into memory, source image or memory image. • Selecting the timing of the pulse signal input to the REMOTE 2 connector • Selecting operation mode for automatic printing capabilities of remote commanders connected to REMOTE 2 connector. • Setting the function of the CLEAR button 	38 86 87 56
INPUT SETUP	<ul style="list-style-type: none"> • Selecting the input signal • Compensating for the input signals. 	14 69
OUTPUT SETUP	<ul style="list-style-type: none"> • Erasing the screen display. • Matching the video monitor color to the printout color. • Selecting whether the printer synchronizes with the internal sync signal included in the channel G of the RGB signals.^{c)} 	89 72 66

a) This menu is the sub menu of the LAYOUT SETUP menu.

When the FLEX IPP application mode is selected, this window is used to set the size of the image.

b) This is the sub menu of the PRINTER SETUP menu.

c) This item is available for models other than UP-2300P.

This section explains the following settings and adjustments.

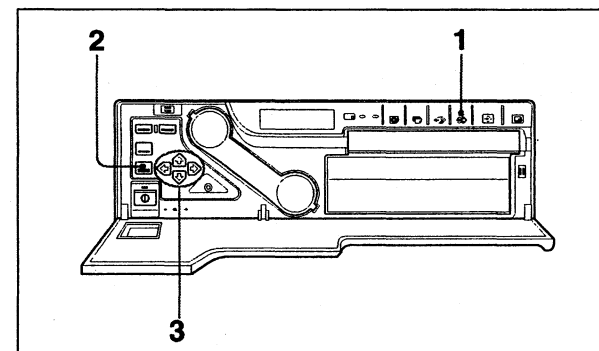
- Compensating for the input signals (on this page)
- Matching the video monitor color to the printout color (page 72)
- Adjusting the printout color and sharpness (page 75)
- Adjusting the tone of the printout (page 80)
- Changing the printout size/printout area (page 82)
- Selecting the operating mode for automatic printing capability (page 85)
- Erasing the screen display (page 89)
- Adjusting the printer window display brightness (page 91)
- Selecting whether to enable the operation and error tones (page 93)
- Setting the baud rate for computer communication (page 95)

Compensating for the Input Signals

A video image recorded under poor conditions may be of poor color quality. If the signal is an NTSC or PAL composite video signal or separate luminance (Y) and chrominance (C) signals, you can correct the color and level of the input signal to a certain extent on the INPUT SETUP menu.

Note

You cannot adjust an image once it has been stored in memory. Restore an image after adjustment.

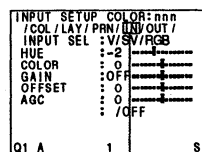


- 1 When the memory image is displayed on the screen, press the SOURCE/MEMORY button.
The image from the video source appears.

Continue to next page →

Setting Up the Printer (continued)

- 2 Press the MENU button, then select INPUT SETUP menu by pressing the \diamond or ∇ button.



Switch IN to green by pressing the \diamond or ∇ button. INPUT SETUP menu appears.



Display IN in capital letters by pressing the \diamond or ∇ button. INPUT SETUP appears.

- 3 Perform the adjustments as follows.
① Select the adjustment item by pressing the \diamond or ∇ button.
② Perform the adjustment by pressing the \leftarrow or \rightarrow button.

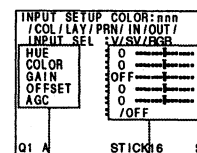
To adjust the color intensity, hue and contrast

Adjustment	Menu adjustment item	Button and operation result	
		\leftarrow button	\rightarrow button
Hue ^{a)}	HUE ^{a)}	The hue becomes greenish.	The hue becomes purplish.
Color intensity	COLOR ^{b)}	The color intensity strengthens. The color intensity weakens.	
	OFF	In case of the black and white image	
Contrast	GAIN	The contrast strengthens.	The contrast weakens.
Brightness	OFFSET	Becomes brighter	Becomes darker

- a) In PAL mode, no HUE adjustment is provided on the INPUT SETUP menu.
b) Adjust the color such that skin tones appear natural. For the COLOR and HUE adjustment, you can correct the color intensity and hue of an NTSC composite video signal or a separated luminance (Y) and chrominance (C) signal.

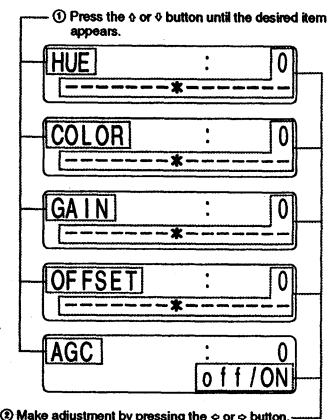
When the printout or monitor image appears blackish or whitish
Adjust the input signal to the optimum level for printing.

Menu adjustment item	Selection	When selecting
AGC (Automatic Gain Control)	ON	Normal (when the proper signal is input)
	OFF	When the printout or monitor image appears blackish or whitish.



② Make adjustment by pressing the \leftarrow or \rightarrow button.

① Position the cursor to the desired item by pressing the \diamond or ∇ button.



- 4 Press the MENU button.
The regular screen appears.

Setting Up the Printer (continued)

Matching the Video Monitor Color to the Printer Color

To match the color of the monitor image to that of the printout, adjust the monitor and printer colors such that the monitor color is the same as that of the printout. The printer outputs either of two kinds of video signals according to the printer settings.

- EE (E to E): Signals are output to the monitor after being processed by the printer's circuitry.
- THRU (THROUGH): Signals are output to the monitor as is.

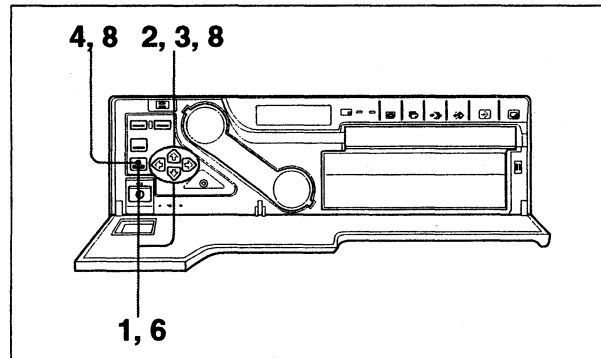
Before adjusting the printout color

The monitor color may not be adjusted correctly even if the printer color is correctly adjusted. Check the color of the video monitor before adjusting the printout color. In such a case, use the THRU signal.

After adjusting the color of the video monitor using video monitor controls, adjust the color of the printer's output signal.

Note

This adjustment is performed to adjust the color of the printer output signal when the monitor color is unsatisfactory. This adjustment does not affect the printout itself. To adjust the color of the printout, see "Adjusting the Printout Color and Sharpness" on page 75).



- 1 Press the MENU button, then select OUTPUT SETUP menu by pressing the \diamond or ∇ button.

```

OUTPUT SETUP COLOR nnn
/ COL / LAY / PRN / IN / OUT /
DISPLAY : OFF / ON
SOURCE : THRU / EE
SYNC ON G : OFF / ON
MONI C-R : 0
MONI M-G : 0
MONI Y-B : 0
Q1 A1 2HF S
  
```

Switch OUT to green by pressing the \diamond or ∇ button. OUTPUT SETUP menu appears.

```

OUTPUT SETUP
/c / l / p / i / OUT /
  
```

Display OUT in capital letters by pressing the \diamond or ∇ button. OUTPUT SETUP appears.

- 2 Select SOURCE by pressing the \diamond or ∇ button.

```

OUTPUT SETUP COLOR nnn
/ COL / LAY / PRN / IN / OUT /
DISPLAY : OFF / ON
SOURCE : THRU / EE
SYNC ON G : OFF / ON
MONI C-R : 0
MONI M-G : 0
MONI Y-B : 0
Q1 A1 2HF S
  
```

Position the cursor to SOURCE by pressing the \diamond or ∇ button.

```

SOURCE :
thru / EE
  
```

Display SOURCE by pressing the \diamond or ∇ button.

- 3 Select EE by pressing the \diamond or ∇ button.

```

OUTPUT SETUP COLOR nnn
/ COL / LAY / PRN / IN / OUT /
DISPLAY : OFF / ON
SOURCE : THRU / EE
SYNC ON G : OFF / ON
MONI C-R : 0
MONI M-G : 0
MONI Y-B : 0
Q1 A1 2HF S
  
```

Switch EE to green by pressing the \diamond or ∇ button.

```

SOURCE :
thru / EE
  
```

Display EE in capital letters by pressing the \diamond or ∇ button.

- 4 Press the MENU button.
The regular screen appears.
- 5 Capture a new image into memory and make a printout.
Adjust the settings by comparing the printout with the image on the monitor.
- 6 Press the MENU button, then select OUTPUT SETUP menu by pressing the \diamond or ∇ button.

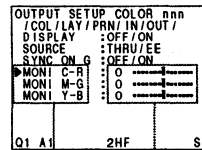
Continue to next page \rightarrow

Setting Up the Printer (continued)

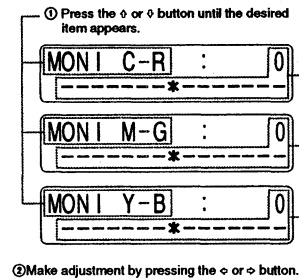
- 7 Adjust the monitor while comparing the printout with the image on the monitor.

- ① Select the adjustment item by pressing the \diamond or ∇ button.
- ② Perform adjustment by pressing the \leftarrow or \rightarrow button.

Menu Adjustment Item	When selecting	Button to be pressed	Adjustment direction on the menu
MONI C-R	To make the screen become reddish	\rightarrow button	Toward R (red)
	To make the screen become cyan (blue)	\leftarrow button	Toward C (cyan)
MONI M-G	To make the screen become greenish	\rightarrow button	Toward G (green)
	To make the screen become magenta (pink)	\leftarrow button	Toward M (magenta)
MONI Y-B	To make the screen become bluish	\rightarrow button	Toward B (blue)
	To make the screen yellowish	\leftarrow button	Toward Y (yellow)



- ① Position the cursor to the desired item by pressing the \diamond or ∇ button.
- ② Make adjustment by pressing the \leftarrow or \rightarrow button.



- 8 Press the MENU button.
The regular screen appears.

Adjusting the Printout Color

You can adjust the printout quality by adjusting the color intensity, printout sharpness and tone (GAMMA) of the printout.

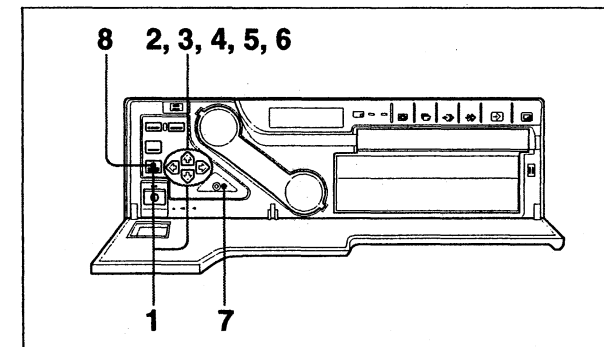
Adjusting the color intensity, contrast and sharpness

You can adjust the color intensity (RED/GREEN/BLUE), contrast (DARK/LIGHT) and printout sharpness. You can store up to three settings. These settings are managed according to the LOAD COLOR number. The color intensity, picture contrast and sharpness of a printout are determined by recalling one of the three settings according to their LOAD COLOR numbers. This is useful when you are using more than one item of video equipment, each having different characteristics, when you want to print images having different color qualities and picture contrast, and when multiple users access a single printer.

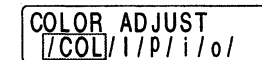
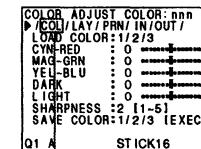
Also, you can make a printout using temporarily set values, without erasing the stored adjustment values.

Perform the adjustments while viewing the images stored in memory.

All values of the color intensity and contrast are factory-set to 0 and the sharpness is set to 3 for LOAD COLOR numbers 1, 2 and 3.



- 1 Press the MENU button, then select COLOR ADJUST menu by pressing the \leftarrow or \rightarrow button.



Display COL in capital letters by pressing the \diamond or ∇ button. COLOR SETUP appears.

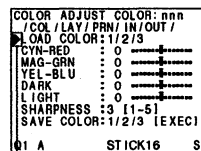
Switch COL to green by pressing the \diamond or ∇ button. COLOR SETUP menu appears.

Continue to next page \rightarrow

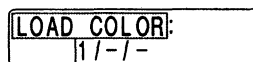
Installation and Adjustment | 75

Setting Up the Printer (continued)

- 2 Select LOAD COLOR by pressing the \diamond or ∇ button.

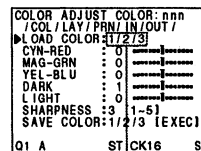


Position the cursor to LOAD COLOR by pressing the \diamond or ∇ button.

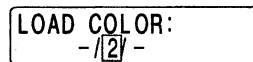


Display LOAD COLOR by pressing the \diamond or ∇ button

- 3 Select the LOAD COLOR number of the values to be adjusted or to be modified by pressing the \diamond or ∇ button.



Switch the desired LOAD COLOR number to green by pressing the \diamond or ∇ button.



Display the desired LOAD COLOR number by pressing the \diamond or ∇ button.

When modifying, you can preserve the original settings. (See "To retain the originally set value" on page 79.)

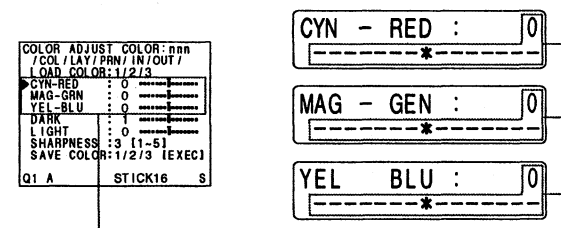
- 4 Adjust the printout color.

- ① Select the item to be adjusted by pressing the \diamond or ∇ button.
- ② Perform the adjustment by pressing the \diamond or ∇ button.

The RED, GREEN and BLUE color component and contrast settings are divided into 15 steps, from -7 to +7, indicated by a value and graph. The center of the graph corresponds to the standard color. You can set the sharpness to any of 5 steps from 1 to +5. On a setting of step 3 corresponds to the standard sharpness.

When adjusting the RED/GREEN/BLUE (color intensity)

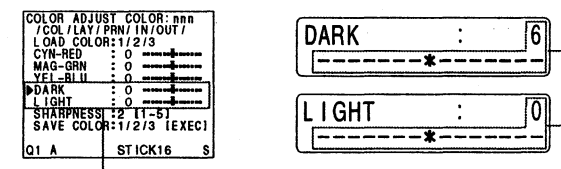
Menu Adjustment Item	When selecting	Button to be pressed	Adjustment direction on the menu
CYN-RED	To make the image reddish	\diamond button	Toward RED
	To make the image cyan (blue)	∇ button	Toward CYN (cyan)
MAG-GRN	To make the image magenta (pink)	\diamond button	Toward MAG (magenta)
	To make the image greenish	∇ button	Toward GRN (green)
YEL-BLU	To make the image yellowish	\diamond button	Toward YEL (yellow)
	To make the image bluish	∇ button	Toward BLU (blue)



Adjust the color intensity

When adjusting DARK/LIGHT (contrast)

Adjustment Item	When selecting
DARK	To adjust the dark area of an image
LIGHT	To adjust the light area of an image



The contrast in the dark area or light area is increased in the + direction by pressing the \diamond button.
The contrast in the dark area or light area is weakened in the - direction by pressing the ∇ button.

Continue to next page →

Setting Up the Printer (continued)

When adjusting the sharpness

You can set the sharpness to any of 5 steps from 1 to 5. A setting of step 3 corresponds to the standard sharpness.

When selecting	Content of settings
To make a soft outline	Toward step 1
To make a normal outline	Centered (step 3)
To make a sharp outline	To the right (toward step 5)

```

COLOR ADJUST COLOR: nnn
/ COL / LAY / PRN / IN / OUT /
LOAD COLOR: 1/2/3
CYN-RED : 0
MAG-GRN : 0
YEL-BLU : 0
DARK : 0
LIGHT : 0
SHARPNESS : 2 [1-5]
SAVE COLOR: 1/2/3 [EXEC]
Q1 A STICK16 S
  
```

SHARPNESS : 2 [1-5]

The number and the corresponding sharpness increase every time you press the \diamond button.
The number and the corresponding sharpness decrease every time you press the \diamond button.

Once you have changed the value

Once you have changed the value, TEMP (temporary) appears on the menu screen. TEMP indicates that the settings are temporary and have not yet been stored.

- 5 Select SAVE COLOR by pressing the \diamond or \diamond button.

```

COLOR ADJUST COLOR: nnn
/ COL / LAY / PRN / IN / OUT /
LOAD COLOR: 1/2/3
CYN-RED : 0
MAG-GRN : 0
YEL-BLU : 0
DARK : 0
LIGHT : 0
SHARPNESS : 2 [1-5]
SAVE COLOR: 1/2/3 [EXEC]
Q1 A STICK16 S
  
```

SAVE COLOR: 1/-/- [EXEC]

Press the \diamond or \diamond button until SAVE COLOR appears.

Position the cursor to SAVE COLOR by pressing the \diamond or \diamond button.

- 6 Select the SAVE COLOR number to which new settings are to be stored by pressing the \diamond or \diamond button.

```

COLOR ADJUST COLOR: nnn
/ COL / LAY / PRN / IN / OUT /
LOAD COLOR: 1/2/3
CYN-RED : 0
MAG-GRN : 0
YEL-BLU : 0
DARK : 0
LIGHT : 0
SHARPNESS : 2 [1-5]
SAVE COLOR: 1/2/3 [EXEC]
Q1 A STICK16 S
  
```

SAVE COLOR: -/2/- [EXEC]

Press the \diamond or \diamond button until the desired SAVE COLOR number appears.

Switch the desired SAVE COLOR number to green by pressing the \diamond or \diamond button.

To retain the originally set value

Select a SAVE COLOR number which is different from the LOAD COLOR number selected in step 3.

- 7 Press the EXEC button.
The settings are registered to the SAVE COLOR number selected in step 6. TEMP disappears from the menu.
- 8 Press the MENU button.
The regular screen appears.

To copy the settings made for one certain LOAD COLOR number to another PRESET number.

- 1 Select the source LOAD COLOR number for which the settings to be copied are stored on the COLOR ADJUST menu.
- 2 Select the target SAVE COLOR number to which data is to be copied.
- 3 Press the EXEC button.
Settings stored to the LOAD COLOR number selected in step 1 are copied to the SAVE COLOR number selected in step 2.

To recall the LOAD COLOR number in which printout color settings (color intensity, contrast and sharpness) are stored

Switch the desired LOAD COLOR number to green for the LOAD COLOR item in the COLOR ADJUST menu.

The printout is made according to the setting of the selected LOAD COLOR number as long as you do not modify the settings.

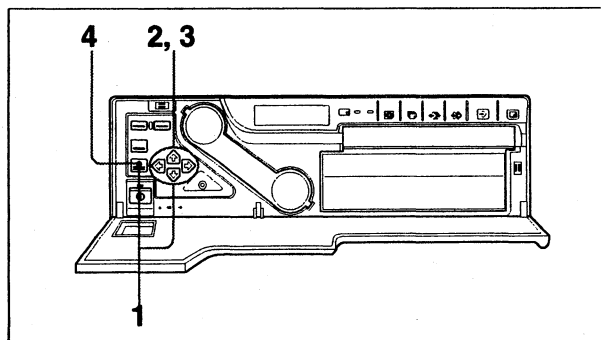
Setting Up the Printer (continued)

Adjusting the tone of the printout

You can adjust the tone so that the details in the white or black part is clearly printed.

Note

The tone (GAMMA) setting is activated only when the UPC-2010 color printing pack or UPC-2020 B/W printing pack is used.



- 1** Press the MENU button, then select PRINTER SETUP menu by pressing the ◀ or ▶ button.

```

PRINTER SETUP COLOR nnn
P/COL/LAY/PRN/IN/OUT/
PRINT QTY : 9 [1-9]
INTERVAL : OFF/ON
GAMMA : S/NORMAL/H
SYSTEM : PRESS [3]
FUNCTION : PRESS [3]
Q1 A1 2HF S
  
```

Switch PRN to green by pressing the ◀ or ▶ button. PRINTER SETUP menu appears.

```

PRINTER SETUP
/c//i/PRN/i/o/
  
```

Display PRN in capital letters by pressing the ◀ or ▶ button. PRINTER SETUP appears.

- 2** Select GAMMA by pressing the ◀ or ▶ button.

```

PRINTER SETUP COLOR nnn
P/COL/LAY/PRN/IN/OUT/
PRINT QTY : 9 [1-9]
INTERVAL : OFF/ON
GAMMA : S/NORMAL/H
SYSTEM : PRESS [3]
FUNCTION : PRESS [3]
Q1 A1 2HF S
  
```

Position the cursor to GAMMA by pressing the ◀ or ▶ button.

```

GAMMA :
S/NORMAL/H
  
```

Display GAMMA by pressing the ◀ or ▶ button.

- 3** Select the desired tone pressing the ◀ or ▶ button.

```

COLOR ADJUST COLOR: nnn
/ COL / LAY / PRN / IN / OUT /
LOAD COLOR: 1/2/3
CYN-RED : 0
MAG-GRN : 0
YEL-BLU : 0
DARK : 1
LIGHT : 0
SHARPNESS : 3 [1-6]
SAVE COLOR: 1/2/3 [EXEC]
Q1 A ST CK16 S
  
```

```

LOAD COLOR:
- / 2 / -
  
```

Display the desired tone by pressing the ◀ or ▶ button.

Switch the desired tone to green by pressing the ◀ or ▶ button.

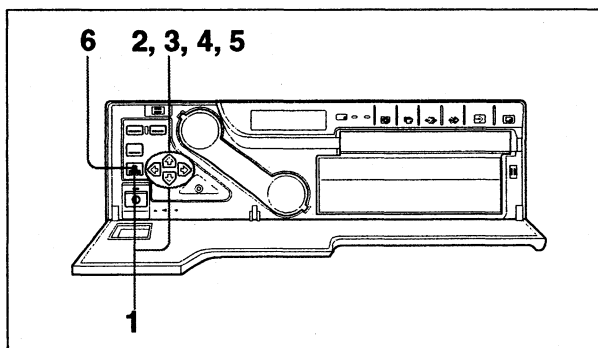
When selecting	Setting
To make a printout of an image where there are a lot of white or light-colored areas.	SOFT
To make a printout of a normal image.	NORMAL
To make a printout of an image where there are a lot of black or dark-colored areas.	HARD

- 4** Press the MENU button.

Setting Up the Printer (continued)

Changing the Printout Size/Printout Area

When you print an image that is narrower or wider than the standard screen size, a black frame may be printed or the image may be partially cut. In such a case, you can change the screen size. Or, a black line may be produced on the printout even though it does not appear on the video monitor. Any portion for which there is no video signal is printed in black. This may occur when you make printouts after connecting a different video source or play back different video software. In such a case, you can adjust the printout area by moving the screen either horizontally or vertically. When a black frame appears around the printout, even after the printout area has been shifted, narrow the printout size because the image has been overscanned beyond the range of the regular screen.



- 1 Press the MENU button, then select LAYOUT SETUP menu by pressing the \diamond or \triangleright button.

```
LAYOUTSETUP COLOR nnn
/ COL / LAY / PRN / IN / OUT /
MEMORY : FRAME / FIELD
MULTI PIX : 1 / 2H / 2 / 4 / 16
SEPARATE : OFF / ON
WINDOW : PRESS [ > ]
CAPTION : PRESS [ > ]
Q1 A1 2HF S
```

Switch LAY to green by pressing the \diamond or \triangleright button. LAYOUT SETUP menu appears.

```
LAYOUTSETUP
/ c / LAY / P / i / o /
```

Display LAY in capital letters by pressing the \diamond or \triangleright button. LAYOUT SETUP appears.

- 2 Select WINDOW by pressing the \diamond or \triangleright button.

```
LAYOUTSETUP COLOR nnn
/ COL / LAY / PRN / IN / OUT /
MEMORY : FRAME / FIELD
MULTI PIX : 1 / 2H / 2 / 4 / 16
SEPARATE : OFF / ON
WINDOW : PRESS [ > ]
CAPTION : PRESS [ > ]
Q1 A1 2HF S
```

Position the cursor to WINDOW by pressing the \diamond or \triangleright button.

```
WINDOW :
PRESS [ > ]
```

Display WINDOW by pressing the \diamond or \triangleright button.

- 3 Press the \diamond button.
The WINDOW SETUP menu appears.

```
WINDOW SETUP COLOR nnn
LAY SETUP : PRESS [ > ]
H START : 00 DOT(S)
V START : 00 DOT(S)
H WIDTH : 800 DOTS
V WIDTH : 472 DOTS
Q1 A1 2HF S
```

WINDOW SETUP

- 4 Adjust the printer according to the obtained printout.
① Select the item to be adjusted by pressing the \diamond or \triangleright button.
② Perform the adjustment by pressing the \diamond or \triangleright button.

When a black frame is printed or the image is partially cut

Adjust the printout size by using the H WIDTH and V WIDTH items from the menu.

When selecting	Adjustment Item	Button to be used	Adjustment result
To change the size, adjust the position of the right edge. The left edge remains fixed. (The screen size changes horizontally.)	H-WIDTH	\diamond button	Widened at the right edge.
		\triangleright button	Narrowed with the left edge remaining fixed.
To change the size, adjust the position of the bottom edge. The top edge remains fixed. (The screen size changes vertically.)	V-WIDTH	\diamond button	Enlarged downwards.
		\triangleright button	Vertical sized reduced with the top edge remaining fixed.

Adjusting the printout size horizontally.

```
WINDOW SETUP COLOR nnn
LAY SETUP : PRESS [ > ]
H START : 00 DOT(S)
V START : 00 DOT(S)
H WIDTH : 800 DOTS
V WIDTH : 472 DOTS
Q1 A1 2HF S
```

H WIDTH : 800 DOTS

V WIDTH : 472 DOTS

Adjusting the printout size vertically.

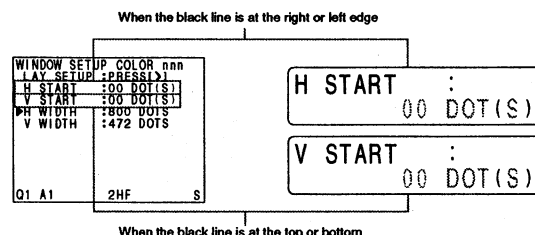
Continue to next page \rightarrow
Installation and Adjustment 83

Setting Up the Printer (continued)

When a black line appears on the printout

Adjust the printout area according to the position of the line on the printout, by using the H START and V START items on the menu.

Position where the black line appears	Menu adjustment item	Button to be used	Adjustment result
On the right	H START (horizontal direction)	↔ button	The image position shifts to the right with the size remaining as is.
On the left		↔ button	The image position shifts to the left with the size remaining as is.
At the top	V START (vertical direction)	↕ button	The image position shifts up with the size remaining as is.
At the bottom		↕ button	The image position shifts down with the size remaining as is.



To clear the adjusted value

Press the MENU button from the WINDOW SETUP menu. The adjusted values are cleared and the values are reset to the original ones.

Note

When a black line still appears, even after adjusting H START or V START, change the printout size.

- Select LAYOUT SETUP by pressing the ⬆ or ⬇ button., then press the ⬅ button.
The adjusted values are stored. The LAYOUT SETUP menu appears.
- Press the MENU button.
The regular screen appears.

To check the adjustment result

Capture a new image and print it to check that no black frame appears on the printout, that the image is not partially cut, and that no black line appears.

Selecting the Operation Mode for Automatic Printing Capabilities

You can control the printer with either of the following options.

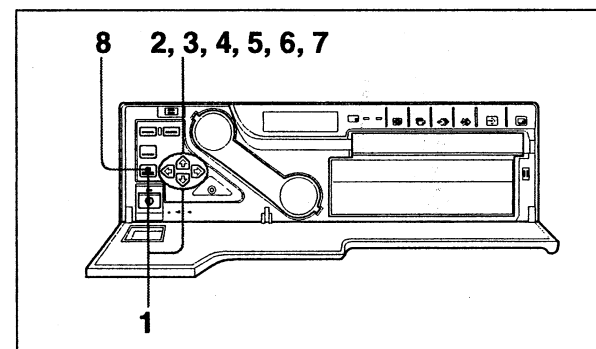
- RM-5500 Remote Control Unit (not supplied): Connected to REMOTE 1 connector
- RM-91 Remote Control Unit, FS-20/36 Foot Switch (not supplied): Connected to REMOTE 2 connector ("Making Connections to Enable Remote Control" page 67)

Using the menu, you can assign desired functions to the remote control unit connected to the REMOTE 2 connector.

In addition to the above, the printer can be remotely controlled by a pulse signal input to REMOTE 2. (see pages 101 and 102).

Also, you can control the printer using the personal computer.

For detailed information on controlling with the computer, contact with your Sony dealer.



- Press the MENU button, then select PRINTER SETUP menu by pressing the ⬅ or ⬇ button.

```

PRINTER SETUP COLOR nnn
▶/COL/LAY/PRN/IN/OUT/
PRINT QTY : 9 [1-9]
INTERVAL : OFF/ON
GAMMA : S/NORMAL/H
SYSTEM : PRESS(Δ)
FUNCTION : PRESS(Δ)

Q1 A1      2HF      S
  
```

Switch PRN to green by pressing the ⬅ or ⬇ button. PRINTER SETUP menu appears.

```

PRINTER SETUP
/c/i/PRN/i/o/
  
```

Display PRN in capital letters by pressing the ⬅ or ⬇ button. PRINTER SETUP appears.

Continue to next page →

Setting Up the Printer (continued)

- 2 Select FUNCTION by pressing the \diamond or ∇ button.

```

PRINTER SETUP COLOR nnn
/ COL / LAY / PRN / IN / OUT /
PRINT QTY : 9 [1-9]
INTERVAL : OFF / ON
GAMMA : S / NORMAL / H
SYSTEM : PRESS [>]
FUNCTION : PRESS [>]
Q1 A1 2HF S

```

Position the cursor to FUNCTION by pressing the \diamond or ∇ button.

FUNCTION :
PRESS [>]

Display FUNCTION by pressing the \diamond or ∇ button.

- 3 Press the \diamond button.
The FUNCTION SETUP menu appears.

```

FUNCTION SETUP COLOR nnn
PRN SETUP : PRESS [>]
AUTO LIVE : OFF / ON
IMMED. CAP. : OFF / ON
RM2 FUNC : / SRC & CAP
CLEAR : / OFF
Q1 A1 2HF S

```

FUNCTION SETUP

- 4 Select IMMED. CAP by pressing the \diamond or ∇ button.

```

FUNCTION SETUP COLOR nnn
PRN SETUP : PRESS [>]
AUTO LIVE : OFF / ON
IMMED. CAP. : OFF / ON
RM2 FUNC : / SRC & CAP
CLEAR : / OFF
Q1 A1 2HF S

```

Position the cursor to IMMED. CAP by pressing the \diamond or ∇ button.

IMMED. CAP. :
OFF / ON

Display IMMED. CAP by pressing the \diamond or ∇ button.

- 5 Select the desired timing to capture the image by pressing the \diamond or ∇ button.

Timing	Selection
To capture the image just after the CAPTURE command is received ^{a)}	ON
To capture the image with the timing pulse input to REMOTE 2 connector ^{b)}	OFF

a) When IMMED. CAP is set to ON, display the source image on the video monitor when sending the timing pulse to the printer. The printer operation is only to capture the image when receiving the pulse.

b) For detailed information on the timing pulse to REMOTE 2 connector, see page 101.

Select ON when you want to capture the image at the precise timing by controlling from the computer.

Note

To control the printer remotely using the remote control unit, set the IMMED.CAP item on the FUNCTION SETUP menu to OFF.

```

FUNCTION SETUP COLOR nnn
PRN SETUP : PRESS [>]
AUTO LIVE : OFF / ON
IMMED. CAP. : OFF / ON
RM2 FUNC : / SRC & CAP
CLEAR : / OFF
Q1 A1 2HF S

```

Switch the desired timing selection to green by pressing the \diamond or ∇ button.

IMMED. CAP. :
OFF / ON

Display the desired timing selection in capital letters by pressing the \diamond or ∇ button.

- 6 Select RM2 FUNC by pressing the \diamond or ∇ button.

```

FUNCTION SETUP COLOR nnn
PRN SETUP : PRESS [>]
AUTO LIVE : OFF / ON
IMMED. CAP. : OFF / ON
RM2 FUNC : / SRC & CAP
CLEAR : / OFF
Q1 A1 2HF S

```

Position the cursor to RM2 FUNC by pressing the \diamond or ∇ button.

RM2 FUNC :
PRINT / >

RM2 FUNC :
< SRC & CAP

Display RM2 FUNC by pressing the \diamond or ∇ button.

Continue to next page →

Setting Up the Printer (continued)

- 7 Select the function that you want to assign to the remote control unit connected to the REMOTE 2 connector by pressing the ◀ or ▶ button.

Items to be selected	Operation
PRINT	Printing whenever you press the switch.
C & PRINT (CAPTURE & PRINT)	Capturing an image to a memory page and printing a memory image. If you press the switch while printing is being performed, the selected image is queued, with the queued image being printed once printing has been completed.
CYCLIC-C (CYCLIC CAPTURE)	Capturing images to memory pages cyclically whenever you press the switch. The printer continues to capture images, replacing that previously stored with a new one.
CAP-STOP (CAPTURE STOP)	Capturing images to a memory page. Once images have been captured to all the memory pages, the printer stops storing images and the message HIT ANY KEY appears.
BACK-SP (CAPTURE BACK)	The pointer (green) returns to its former position whenever you press the switch.
POINTER	The pointer (green) moves to the next position whenever you press the switch.
STOP	Stopping printing whenever you press the switch. A paper which is currently being printed will be ejected.
CAP/SRC (CAPTURE/SOURCE)	When the source image is displayed, the image is captured to memory whenever you press the switch. When the memory image is displayed, the source image appears whenever you press the switch.
PRINT & PAGE	Starting to print when you press the switch if the image has been captured in the memory, and at the same time moving to the next memory page. If the image has not been captured in the memory page, the printer does not work correctly when you press the switch of the remote control unit.
SRC & CAP (SOURCE & CAPTURE)	When you press and hold down the switch of the remote control unit, the source image appears on the monitor screen and captures the image at the instant you release the switch.

```

FUNCTION SETUP COLOR nnn
PRN SETUP : PRESS [X]
AUTO LIVE : OFF/ON
IMMED. CAP. : OFF/ON
RM2 FUNC : PRINT/
CLEAR : ALL/
Q1 A1 2HF S

```

Switch the desired function to green by pressing the ◀ or ▶ button.

When > is displayed, another function can be selected by pressing the ◀ button. When < and > are displayed, another function can be selected by pressing either the ◀ or ▶ button.

```

RM2 FUNC :
PRINT/ >
:
RM2 FUNC :
< SRC&CAP

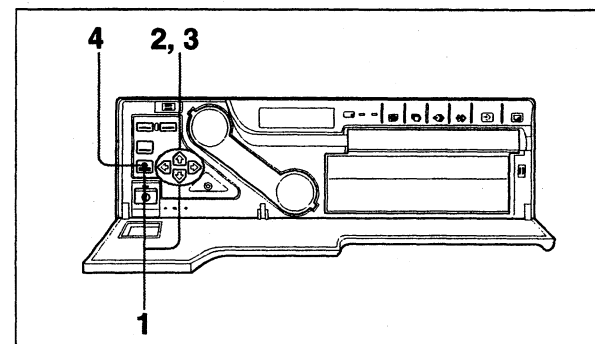
```

Display the desired function by pressing the ◀ or ▶ button.

- 8 Press the MENU button.
The regular screen appears.

Erasing the Screen Display

You can erase a screen display with the menu when, for example, it is hard to see the image that is hidden behind the screen display. The printer operation is identical, regardless of whether screens are displayed. The same messages are displayed in the printer window display. The printer window display is equipped with the models other than UP-2300P.



- 1 Press the MENU button, then select OUTPUT SETUP menu by pressing the ◀ or ▶ button.

```

OUTPUT SETUP COLOR nnn
/ COL/LAY/PRN/IN/OUT/
DISPLAY : OFF/ON
SOURCE : THRU/EE
SYNC ON G : OFF/ON
MONI C-R : 0
MONI M-G : 0
MONI Y-B : 0
Q1 A1 2HF S

```

```

OUTPUT SETUP
/c/l/p/i/OUT/

```

Display OUT in capital letters by pressing the ◀ or ▶ button. OUTPUT SETUP appears.

Switch OUT to green by pressing the ◀ or ▶ button. OUTPUT SETUP menu appears.

- 2 Select DISPLAY by pressing the ◀ or ▶ button.

```

OUTPUT SETUP COLOR nnn
/ COL/LAY/PRN/IN/OUT/
DISPLAY : OFF/ON
SOURCE : THRU/EE
SYNC ON G : OFF/ON
MONI C-R : 0
MONI M-G : 0
MONI Y-B : 0
Q1 A1 2HF S

```

```

DISPLAY :
off/ON

```

Display DISPLAY by pressing the ◀ or ▶ button.

Position the cursor to DISPLAY by pressing the ◀ or ▶ button.

Continue to next page →
Installation and Adjustment 89

Setting Up the Printer (continued)

- 3 Select OFF by pressing the \diamond or ∇ button.

```

OUTPUT SETUP COLOR nnn
/ COL / LAY / PRN / IN / OUT /
DISPLAY : OFF / ON
SOURCE : THRU / EE
SYN C ON G : OFF / ON
MONI C-R : 0
MONI W-G : 0
MONI Y-B : 0
Q1 A1 2HF S
  
```

Switch OFF to green by pressing the \diamond or ∇ button.

To display screen messages

Select ON in step 3.

Note

If you set the printer output signal specification to THRU (through), screen messages do not appear, even when you switch ON to green. However, error messages can appear at any time.

- 4 Press the MENU button.
The regular screen appears.

To temporarily erase the monitor display

When the MENU screen arrears: While the DISPLAY OFF button on the sub panel is held down, the screen display disappears, even if DISPLAY OFF is set to ON. Upon releasing the DISPLAY OFF button, the screen display appears again.

When the regular screen arrears: The screen messages switches on the and off whenever you press the DISPLAY OFF button, regardless of the menu setting on the OUTPUT SETUP menu.

```

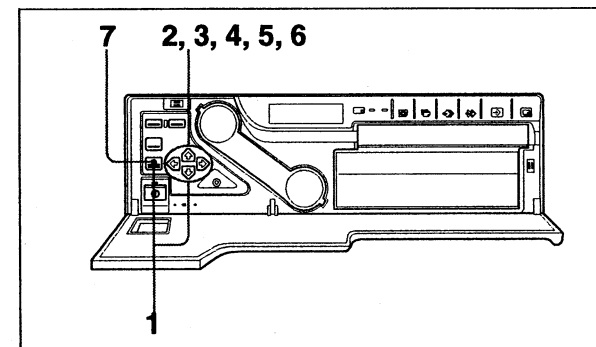
SOURCE :
thru / EE
  
```

Display OFF in capital letters by pressing the \diamond or ∇ button.

Adjusting the Brightness of the Printer Window Display

When it is hard to read the contents of the printer window display, adjust the brightness with the menu.

The printer window display is equipped with the models other than UP-2300P.



- 1 Press the MENU button, then select PRINTER SETUP menu by pressing the \diamond or ∇ button.

```

PRINTER SETUP COLOR nnn
/ COL / LAY / PRN / IN / OUT /
PRINT QTY : 9 [1-9]
INTERVAL : OFF / ON
GAMMA : S / NORMAL / H
SYSTEM : PRESS [ > ]
FUNCTION : PRESS [ > ]
Q1 A1 2HF S
  
```

Switch PRN to green by pressing the \diamond or ∇ button. PRINTER SETUP menu appears.

```

PRINTER SETUP
/ c / l / PRN / i / o /
  
```

Display PRN in capital letters by pressing the \diamond or ∇ button. PRINTER SETUP appears.

- 2 Select SYSTEM by pressing the \diamond or ∇ button.

```

PRINTER SETUP COLOR nnn
/ COL / LAY / PRN / IN / OUT /
PRINT QTY : 9 [1-9]
INTERVAL : OFF / ON
GAMMA : S / NORMAL / H
SYSTEM : PRESS [ > ]
FUNCTION : PRESS [ > ]
Q1 A1 2HF S
  
```

Position the cursor to SYSTEM by pressing the \diamond or ∇ button.

```

SYSTEM :
PRESS [ > ]
  
```

Display SYSTEM by pressing the \diamond or ∇ button.

Continue to next page →

Installation and Adjustment 91

Setting Up the Printer (continued)

- 3** Press the \diamond button.
The SYSTEM SETUP menu appears.

```

SYSTEM SETUP COLOR nnn
PRN SETUP :PRESS [>]
LCD-CNTR. : 7
BAUDRATE  : /24/4800/96
BEEP       : OFF/ON
APPLI.     : STANDARD
Q1 A1      2HF      S
  
```

SYSTEM SETUP

- 4** Select LCD CNTR. by pressing the \diamond or ∇ button.

```

SYSTEM SETUP COLOR nnn
PRN SETUP :PRESS [>]
LCD-CNTR. : 7
BAUDRATE  : /24/4800/96
BEEP       : OFF/ON
APPLI.     : STANDARD
Q1 A1      2HF      S
  
```

LCD-CNTR. : 7

Display LCD CNTR. by pressing the \diamond or ∇ button.

Position the cursor to LCD CNTR.
by pressing the \diamond or ∇ button.

- 5** Adjust the brightness of the printer window display by pressing the \diamond or ∇ button.

```

SYSTEM SETUP COLOR nnn
PRN SETUP :PRESS [>]
LCD-CNTR. : 5
BAUDRATE  : /24/4800/96
BEEP       : OFF/ON
APPLI.     : STANDARD
Q1 A1      2HF      S
  
```

LCD-CNTR. : 5

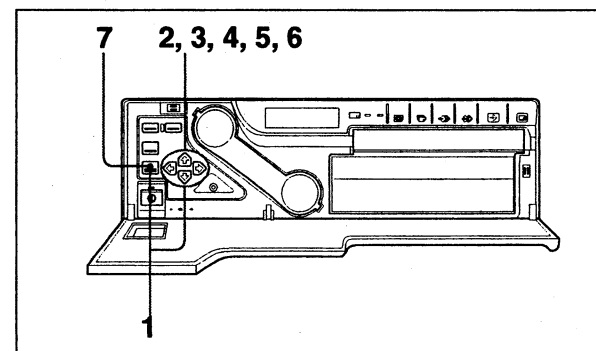
The number increases and the contrast increases
every time the \diamond button is pressed.
The number decreases and the contrast decreases
every time the ∇ button is pressed.

- 6** Select PRN SETUP by pressing the \diamond or ∇ button, then press the \diamond button.
The adjusted values are stored. The PRINTER SETUP menu appears.

- 7** Press the MENU button.
The regular screen appears.

Selecting Whether the Operation and Error Tones Sound

Whenever you press a button on the front panel or sub panel, the operation tone sounds (one time). When an error occurs, the alarm tone sounds (three times). You can turn these tones on and off with menu.



- 1** Press the MENU button, then select PRINTER SETUP menu by pressing the \diamond or ∇ button.

```

PRINTER SETUP COLOR nnn
/ COL / LAY / PRN / IN / OUT /
PRINT QTY : 9 (1-9)
INTERVAL  : OFF/ON
GAMMA     : S / NORMAL / H
SYSTEM    : PRESS [>]
FUNCTION   : PRESS [>]
Q1 A1      2HF      S
  
```

PRINTER SETUP
/ c / i / PRN / i / o /

Display PRN in capital letters by pressing the \diamond or ∇ button. PRINTER SETUP appears.

Switch PRN to green by pressing the \diamond or ∇ button. PRINTER SETUP menu appears.

- 2** Select SYSTEM by pressing the \diamond or ∇ button.

```

PRINTER SETUP COLOR nnn
/ COL / LAY / PRN / IN / OUT /
PRINT QTY : 9 (1-9)
INTERVAL  : OFF/ON
GAMMA     : S / NORMAL / H
SYSTEM    : PRESS [>]
FUNCTION   : PRESS [>]
Q1 A1      2HF      S
  
```

SYSTEM :
PRESS [>]

Display SYSTEM by pressing the \diamond or ∇ button.

Position the cursor to SYSTEM by pressing the \diamond or ∇ button.

Continue to next page →

Installation and Adjustment 93

Setting Up the Printer (continued)

- 3 Press the \diamond button.
The SYSTEM SETUP menu appears.

```

SYSTEM SETUP COLOR nnn
PRN SETUP :PRESS [2]
LCD-CNTR. : 7
BAUDRATE  : /24/4800/96
BEEP       : OFF/ON
APPLI.     : STANDARD
Q1 A1      2HF      S
  
```

SYSTEM SETUP

- 4 Select BEEP by pressing the \diamond or ∇ button.

```

SYSTEM SETUP COLOR nnn
PRN SETUP :PRESS [2]
LCD-CNTR. : 7
BAUDRATE  : /24/4800/96
BEEP       : OFF/ON
APPLI.     : STANDARD
Q1 A1      2HF      S
  
```

BEEP : off/ON

Display BEEP by pressing the \diamond or ∇ button.

Position the cursor to BEEP by pressing the \diamond or ∇ button.

- 5 Select whether the operation and error tones sound by pressing the \diamond or ∇ button.

```

SYSTEM SETUP COLOR nnn
PRN SETUP :PRESS [2]
LCD-CNTR. : 7
BAUDRATE  : /24/4800/96
BEEP       : OFF/ON
APPLI.     : STANDARD
Q1 A1      2HF      S
  
```

BEEP : off/ON

Display the desired operation in capital letters by pressing the \diamond or ∇ button.

Display the desired operation in capital letters by pressing the \diamond or ∇ button.

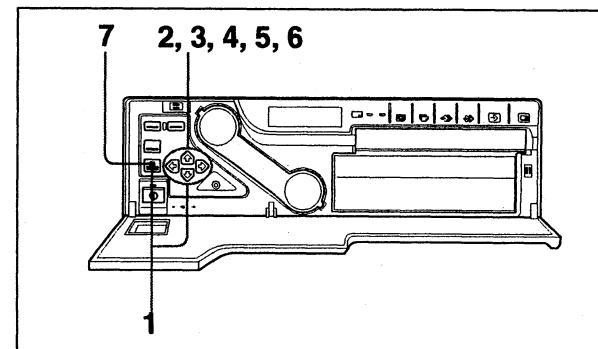
When selecting	Selection
To sound the tones	ON
To disable the tones	OFF

- 6 Select PRN SETUP by pressing the \diamond or ∇ button., then press the \diamond button.
The adjusted values are stored. The PRINTER SETUP menu appears.

- 7 Press the MENU button.
The regular screen appears.

Setting the Baud Rate for Computer Communication

When controlling the printer with a computer connected to the printer's RS-232C connector, select the appropriate baud rate. For details, contact your nearest Sony dealer.



- 1 Press the MENU button, then select PRINTER SETUP menu by pressing the \diamond or ∇ button.

```

PRINTER SETUP COLOR nnn
/ COL/LAY/PRN/IN/OUT/
PRINT QTY :9 [1-9]
INTERVAL  : OFF/ON
GAMMA     : S/NORMAL/H
SYSTEM    : PRESS [2]
FUNCTION   : PRESS [2]
Q1 A1      2HF      S
  
```

Switch PRN to green by pressing the \diamond or ∇ button. PRINTER SETUP menu appears.

PRINTER SETUP
/c/i/PRN/i/o/

Display PRN in capital letters by pressing the \diamond or ∇ button. PRINTER SETUP appears.

- 2 Select SYSTEM by pressing the \diamond or ∇ button.

```

PRINTER SETUP COLOR nnn
/ COL/LAY/PRN/IN/OUT/
PRINT QTY :9 [1-9]
INTERVAL  : OFF/ON
GAMMA     : S/NORMAL/H
SYSTEM    : PRESS [2]
FUNCTION   : PRESS [2]
Q1 A1      2HF      S
  
```

Position the cursor to SYSTEM by pressing the \diamond or ∇ button.

SYSTEM : PRESS [2]

Display SYSTEM by pressing the \diamond or ∇ button.

Continue to next page →

Setting Up the Printer (continued)

- 3 Press the \diamond button.
The SYSTEM SETUP menu appears.

```

SYSTEM SETUP COLOR nnn
PRN SETUP :PRESS (X)
LCD-CNTR : 7
BAUDRATE : /24/4800/96
BEEP : OFF/ON
APPLI. : STANDARD
Q1 A1 2HF S
  
```

SYSTEM SETUP

- 4 Select BAUD RATE by pressing the \diamond or ∇ button.

```

SYSTEM SETUP COLOR nnn
PRN SETUP :PRESS (X)
LCD-CNTR : 7
BAUDRATE : /24/4800/96
BEEP : OFF/ON
APPLI. : STANDARD
Q1 A1 2HF S
  
```

BEEP : off/ON

Display BAUD RATE by pressing the \diamond or ∇ button.

Position the cursor to BAUD RATE by pressing the \diamond or ∇ button.

- 5 Select the desired baud rate by pressing the \diamond or ∇ button.

```

SYSTEM SETUP COLOR nnn
PRN SETUP :PRESS (X)
LCD-CNTR : 7
BAUDRATE : /24/4800/96
BEEP : OFF/ON
APPLI. : STANDARD
Q1 A1 2HF S
  
```

BAUDRATE : 12/24/4800/96

Display the desired baud rate in four digits by pressing the \diamond or ∇ button.

Switch the desired baud rate to green by pressing the \diamond or ∇ button.

Baud rate (bps)	Baud rate displayed on the menu. (The display changes from upper-two digit indication to spelled-out indication.)
1200	12 → 1200
2400	24 → 2400
4800	48 → 4800
9600	96 → 9600

- 6 Select PRN SETUP by pressing the \diamond or ∇ button., then press the \diamond button.
The adjusted values are stored. The PRINTER SETUP menu appears.
- 7 Press the MENU button.
The regular screen appears.

Others

Precautions

Safety

- Operate the printer using the power source specified in "Specifications" (page 100)
- Be careful not to damage the power cable by placing or dropping heavy objects on it; it is dangerous to use the unit with a damaged power cable.
- If you do not intend to use the unit for a long time, disconnect the power cable.
- Unplug the power cable by grasping the plug, not the cable itself.
- Do not disassemble the unit.
- Do not remove the cover. There is a danger of electric shock from the internal parts.
- Be careful not to spill water or other liquids on the unit, or to allow combustible or metallic material to enter the cabinet. If used with foreign matter in the cabinet, the unit is liable to fail, or present a risk of fire or electric shock.
- Ventilation holes are provided to prevent the unit from overheating. Be careful not to obstruct them with other units or by covering the unit with a cloth etc.
- If the unit malfunctions or if a foreign body falls into the cabinet, disconnect the power immediately and consult your Sony service facility or your Sony dealer.
- Do not open the top cover of the printer during printing because of mechanical hazard. If you do, turn off the power switch first.

Installation

- Avoid placing the unit in a location subject to:
 - mechanical vibration
 - high humidity
 - excessive dust
 - direct or excessive sunlight
 - extremely high or low temperatures
- Do not use other electronic equipment near the unit. The unit will not work properly in strong electromagnetic fields.
- Do not place a heavy object such as a monitor on the printer.

Condensation

- If the printer is subject to wide and sudden changes in temperature, such as when it is moved from a cold room to a warm room or when it is left in a room with a heater that tends to produce large amounts of moisture, condensation may form inside the printer. In such cases the printer will probably not work properly, and may even develop a fault if you persist in using it. If condensation forms, turn off the power and leave the printer to stand for at least one hour.
- If the printing pack is subjected to wide and sudden changes in temperature, condensation may form on the ink ribbon or paper. This will cause the printer to malfunction. Also, if the printing pack is used in this state, spots are likely to appear on the printout. Therefore, avoid storing the printing pack in locations subject to wide and sudden changes of temperature.
- To store a half-used printing pack, replace it in its original packing and reseal the package. If possible, keep the sealed printing pack in a cool, dark location. To subsequently use the printing pack, place it, in its sealed package, in a warm room for several hours. Doing so prevents condensation from forming when the printing pack is removed from its package.

Precautions (continued)**Location**

To prevent internal heat built-up, leave enough room around the printer for air to circulate through the vents on the left hand side of the cabinet.

On transportation

Do not transport the printer with the supplied accessories. Doing so may cause malfunction.

Cleaning

Clean the cabinet, panel and controls with a soft dry cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent, such as alcohol or benzene, which may damage the finish.

Ink Ribbon Cartridge and Paper

Both paper and an ink ribbon cartridge are necessary for printing. Use the ink ribbon with the paper contained in the same package.

UPC-2010 Color Printing Pack

Contains color ink ribbon cartridge and paper.
Color ink ribbon cartridge 1 roll
A-6 (4 1/4 x 5 3/4 inches) size paper 200 sheets

Self-laminating Color Printing Pack UPC-2040A

Contains an ink ribbon cartridge and paper for automatic laminate coating.
Color ink ribbon cartridge 1 roll
A-6 size paper 120 sheets (The size is a little larger than paper of another printing pack).

16-split Self-adhesive Pre-cut Color printing pack UPC-20S16E

Contains an ink ribbon cartridge and paper for sticker of 16 reduced images.
Color ink ribbon cartridge 1 roll
A-6 (4 1/4 x 5 3/4 inches) size paper 200 sheets

4-split Self-adhesive Pre-cut Color printing pack UPC-20S04E

Contains an ink ribbon cartridge and paper for sticker of 4 reduced images.
Color ink ribbon cartridge 1 roll
A-6 (4 1/4 x 5 3/4 inches) size paper 200 sheets

Color Postcard Printing Pack UPC-2070E

Contains an ink ribbon cartridge and paper for post cards
Color ink ribbon cartridge 1 roll
A-6 size paper 150 sheets (The size is a little larger than paper of another printing pack).

B/W Printing Pack UPC-2020

Contains an ink ribbon cartridge and paper.
B & W ink ribbon cartridge 1 roll
A-6 (4 1/4 x 5 3/4 inches) size paper 200 sheets

Notes

- Use only the ink ribbon cartridge and paper designed for use with this printer. If you use a different type, the printer may not print properly or malfunction.
- Use the ink ribbon with the paper contained in the same package. If the printer detects an incompatible combination, an error message appears in the printer window display. Doing so may result in degradation of the print picture quality and occurrence of any trouble.
- Ink ribbon and paper are not reusable. Once exhausted, replace them with new ones.

About UPA-2002 paper tray (not supplied)

The paper size of the UPC-2040A self-laminating color printing pack and the UPC-2070E postcard color printing pack is a little larger than paper of other printing packs. The paper tray supplied with the printer is too small to load UPC-2040A and UPC-2070E paper.
To use these types of paper, the UPA-2002 paper tray (not supplied) is required.

Specifications

Power requirements

UP-2300P/2800P/2850P: 220 to
240 V AC, 50/60 Hz
UP-2900MD/2950MD: 120 to
240 V AC, 50/60 Hz

Power consumption

UP-2300P/2800P/2850P: About
1.0 A max. at 25°C, 240 V AC
UP-2900MD/2950MD: About
1.0 A max. at 25°C, 240 V AC
1.8 A max. at 25°C, 120 V AC

Operating temperature

5°C to 35°C (41°F to 95°F)

Operating humidity

20 % to 80 %
(no condensation allowed)

Storage and transport temperature

-20°C to 60°C (-4°F to 140°F)

Storage and transport humidity

20 % to 90 %
(no condensation allowed)

Dimensions

About 370 × 125 × 417 mm (w/h/d)
(14 5/8 × 5 × 16 3/4 inches)

Mass

About 14 kg (15 lb 14 oz)

Printing system

Sublimation heat transfer printing
12.2 dot/mm (1024 dots)

Total gradation

256 levels each for yellow,
magenta, and cyan

Printing time

Approximately 35 seconds

TV system

UP-2300P/2800P/2850P: PAL
B.G.I standards
UP-2900MD/2950MD: Selectable
with the NTSC/PAL selector
In NTSC mode: NTSC/EIA
standards
In PAL mode: PAL B.G.I
standards

Input connectors

RGB SYNC (analog RGB signal):

BNC connector × 4 (for UP-2800P/
2850P/2900MD/2950MD)

RGB: 0.7 Vp-p

SYNC: 0.3 to 4 Vp-p

75 ohms (terminated), sync
negative

S VIDEO (Separate luminance (Y) and

chrominance (C) signals):

4-pin mini-DIN × 1

Y: 1 Vp-p

C: For NTSC/EIA standards: 0.29

Vp-p color burst for PAL B.G.I
standards: 0.3 Vp-p color burst

75 ohms (terminated), sync
negative

VIDEO (NTSC composite video signal for
NTSC/EIA standards and PAL
composite video signal for PAL
B.G.I standards):

BNC connector × 1

1 Vp-p, 75 ohms (terminated), sync
negative

AC IN (for power input)

Output connectors

RGB SYNC (analog RGB signal):

BNC connector × 4 for UP-2800P/
2850P/2900MD/2950MD)

RGB: 0.7 Vp-p

SYNC: 1 Vp-p

75 ohms (terminated), sync
negative

S VIDEO (Separate luminance (Y) and

chrominance (C) signals):

4-pin mini-DIN × 1

Y: 1 Vp-p

C: for NTSC/EIA standards: 0.29
Vp-p color burst for PAL B.G.I
standards: 0.3 Vp-p color burst

75 ohms (terminated), sync
negative

VIDEO (NTSC composite video signal for
NTSC/EIA standards and PAL
composite video signal for PAL
B.G.I standards) BNC connector
× 1

1 Vp-p, 75 ohms (terminated), sync
negative

Controls connectors

REMOTE 1 : special mini jack × 1

For RM-5500 Remote Control Unit
(not supplied)

REMOTE 2 (automatic printing connector):

Stereo mini jack : × 1

For RM-91 Remote Control Unit or

FS-20/36 Foot Switch (not
supplied) (see "Selecting the
Operation Mode for Automatic
Printing Capabilities" page 85)

RS-232C (Computer control interface):

D-SUB 25-pin connector × 1

Output: 3 kilohms at load

Typ ± 8 V

Input: 5-kilohm load

High level 5 to 15 V

Low level -5 to -15 V

STROBE (× terminal): (only for UP-2300P)

(see "Output timing of
synchronous signal for electronic
flash)

Supplied accessories

Color printing pack (1)

Paper tray (1)

Paper cover (1)

AC power cord (1)

Warranty card (1)

(for UP-2900MD/2950MD)

Instructions for Use (1)

Optional accessories

UPC-2010 color printing pack

Self-laminating color printing pack

UPC-2040A

16-split Self-adhesive Pre-cut color

printing pack UPC-20S16E

4-split Self-adhesive Pre-cut color

printing pack UPC-20S04E

Color Postcard printing pack

UPC-2070E

B/W printing pack

UPC-2020

UPA-2001 paper ejector

UPA-2002 paper tray

RM-5500 remote control unit

RM-91 remote control unit

FS-20 foot switch

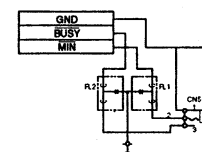
FS-36 foot switch

Using the automatic printing capabilities (REMOTE 2)

If you send the remote control pulse signals
illustrated through the REMOTE 2 connector, the
printer is remotely controlled according to the
remote control setting. (see page 85)

Turn on the power of the printer and display the
source image on the monitor screen. Send a remote
control pulse signal at the timing shown below.
The timing depends on the setting on item
IMMED. CAP of the FUNCTION SETUP menu.

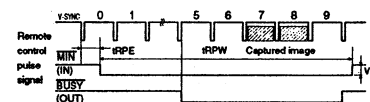
Remote 2 connector pin assignment



Note

The remote control pulse signal examples
introduced here are one of the typical operation
timing. The timing may be affected due to the
selected memory page and print type.

When IMMEDIATE CAP. is set to OFF



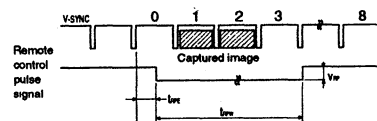
Notation	Parameter	MIN	TYP	MAX	Unit	Remarks
IRPE	Time within which 3 a remote control pulse should be cleared to zero.	—	12	msec	—	
IRPW	Length of a remote control pulse.	100	—	—	msec	—
VRP	Amplitude of a remote control pulse.	—	—	5	V	This value is based on TTL standards.

Specifications (continued)

Note

When AUTO LIVE of the FUNCTION-SETUP menu is set to OFF, the memory image is displayed on the screen after the image is captured in memory. In such a case, whenever you store the image, press the SOURCE/MEMORY button so that the source image appears on the video monitor. Displaying the memory image does not allow to capture the image with the correct timing.

When IMMED. CAP. is set to ON

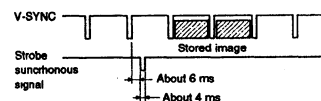


Notation	Parameter	MIN	TYP	MAX	Unit	Remarks
tRPE	Time within which a remote control pulse should be cleared to zero.	—	—	10	msec	—
tRPW	Length of a remote control pulse.	100	—	—	msec	—
VRP	Amplitude of a remote control pulse.	—	—	5	V	This value is based on TTL standards.

Note

This mode is effective only the source image is displayed on the monitor screen. If the memory image is displayed, the image will not be captured even if the pulse is sent to the printer. Be sure to display the source image when sending the pulse.

Output timing of the synchronous signal for electronic flash



Design and specifications are subject to change without notice.

Error/Warning Messages

There are two kinds of messages: error messages and warning messages. This section lists these messages together with their possible causes and remedies. Note the messages and act accordingly.

Error messages

If a problem occurs, the ALARM lamp lights orange and an error message stating the problem appears on the monitor and in the printer window display.

Message	Possible cause and remedies
On the monitor	In the printer window display
MECHA TROUBLE: HEAD	MECHA TROUBLE HEAD <ul style="list-style-type: none"> • The ink ribbon cartridge is not loaded correctly. <ul style="list-style-type: none"> → Check the ink ribbon cartridge and load it correctly. (page 9) • The paper has jammed inside the printer. <ul style="list-style-type: none"> → Check the position where paper has jammed and remove any jammed paper from the printer. (page 105)
MECHA TROUBLE: TRAY	MECHA TROUBLE TRAY <ul style="list-style-type: none"> • The paper tray has got out of position. <ul style="list-style-type: none"> Contact your Sony service facility or your Sony dealer to clear error status.
MECHA TROUBLE: PLATEN	MECHA TROUBLE PLATEN <ul style="list-style-type: none"> • The paper has jammed inside the printer. <ul style="list-style-type: none"> → Check the position where paper has jammed and remove any jammed paper from the printer. (page 105)
MECHA TROUBLE: LOAD	MECHA TROUBLE LOAD PAPER
MECHA TROUBLE: EJECT	MECHA TROUBLE EJECT PAPER
MECHA TROUBLE: CHUCK	MECHA TROUBLE CHUCK
CHECK RIBBON	CHECK RIBBON <ul style="list-style-type: none"> • The ink ribbon cartridge is defective. <ul style="list-style-type: none"> → Replace the defective ink ribbon cartridge with the new one. • The ink ribbon has torn. <ul style="list-style-type: none"> → Repair the tear. (page 11) • The ink ribbon cartridge that can not be used with this printer has been loaded. <ul style="list-style-type: none"> → Load the appropriate ink ribbon cartridge.
PAPER JAMMING	PAPER JAMMING <ul style="list-style-type: none"> • The paper has jammed inside the printer. <ul style="list-style-type: none"> → Check the position where paper has jammed and remove any jammed paper from the printer. (page 105)
SENSOR TROUBLE	SENSOR TROUBLE <ul style="list-style-type: none"> • Sensor trouble has occurred. <ul style="list-style-type: none"> The printer must not be operated any further. Turn off the power immediately and contact your Sony service facility or your Sony dealer.
REMOVE PAPER COVER	REMOVE PAPER COVER <ul style="list-style-type: none"> • The paper jammed around the top cover. <ul style="list-style-type: none"> Open the top cover and remove any jammed paper.
END OF RIBBON	END OF RIBBON <ul style="list-style-type: none"> • The ink ribbon has been exhausted. <ul style="list-style-type: none"> Replace the old one with a new ink ribbon cartridge. (see page 9) (The ink ribbon cannot be reused.)
INSERT RIBBON	INSERT RIBBON <ul style="list-style-type: none"> • The ink ribbon cartridge is not loaded. <ul style="list-style-type: none"> → Load the ink ribbon cartridge. (page 9)
SET PAPER	SET PAPER <ul style="list-style-type: none"> • Paper has been exhausted. <ul style="list-style-type: none"> → Load the paper. (see page 12) • The paper tray is not installed. <ul style="list-style-type: none"> → Install the paper tray. (page 12)

Continue to next page →

Others 103

Error/Warning Messages (continued)

Message		Possible cause and remedies
On the monitor	In the printer window display	
INSERT RIBBON AND PAPER	INSERT RIBBON SET PAPER	The ink ribbon cartridge and paper are not loaded. → Load the ink ribbon cartridge and paper. (pages 9 and 12)
REMOVE PRINTS	REMOVE PRINTS	The maximum number of printouts has accumulated on the paper cover. → Remove the printouts from the paper cover.
REMOVE PAPER: TRAY	REMOVE PAPER TRAY	The paper jams around the paper tray as it is being fed into the ribbon area. → Remove any jammed paper. (see page 105)
CLOSE COVER	CLOSE COVER	The top cover opens → Close the top cover.

Warning messages

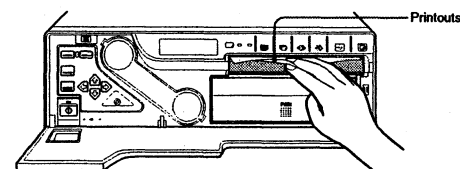
In the case of a warning, only warning messages appear. The ALARM lamp does not light.

Warning message		Possible causes and remedies
On the monitor	In the printer window display	
PLEASE WAIT NOW PRINTING	PLEASE WAIT NOW PRINTING	The printer is printing, preventing any other operation. → Wait until the printer finishes printing, then retry the operation.
HIT ANY KEY	HIT ANY KEY	This message appears when the remote control unit is used in CAPTURE STOP mode and when the printer stops capturing images to memory pages once images have been captured to all memory pages. → Press any button. Printer operation is enabled after this.
INPUT MISMATCH	INPUT MISMATCH	<ul style="list-style-type: none"> The TV system of the signal input from the source equipment (VTR, video camera and so on) is not compatible with the TV system of your printer. → Check the signal of TV system and input the correct one. The signal other than the video signal (such as audio signal and similar) is input. → Input the correct video signal.
	INPUT ILLEGAL	
PLEASE WAIT RESERVED MEMORY	PLEASE WAIT RESERVED MEMORY	Printing is queued for the selected memory page. → Retry the operation once the printer finishes printing.
PLEASE WAIT PRINTING MEMORY	PLEASE WAIT PRINTING MEMORY	The image captured in the selected memory page is being printed. → Retry the operation once the printer finishes printing.
NO INPUT	NO INPUT	The printer is not receiving an input signal from equipment corresponding to the input selected on the INPUT SETUP menu. → Check the input signal selected on the INPUT SETUP menu. (page 14) → Check whether the video equipment is outputting a video signal in playback mode. → Check that the connections between signal source equipment and the printer are secure. (page 65)
NO IMAGE	NO IMAGE	The image is not captured in memory. → Capture the image in memory then start printing. (page 16)
PLEASE WAIT HEAD IN COOLING	PLEASE WAIT HEAD IN COOLING	The thermal head has overheated. → Leave the printer until the head cools down and this message disappears. The printer starts printing automatically.
PLEASE WAIT SET IN COOLING	PLEASE WAIT SET IN COOLING	The inside of the printer has overheated. → Leave the printer until its inside cools down and this message disappears. The printer starts printing automatically.

If the paper jams

If the paper jams after pressing the PRINT button, the message stating that paper jammed appears on the video monitor and in the printer window display. Follow the steps below to remove the jammed paper. When the jammed paper is removed, you do not need to continue operation explained below. Stop operation and reset removed paper cover, paper tray or ink ribbon holder if any.

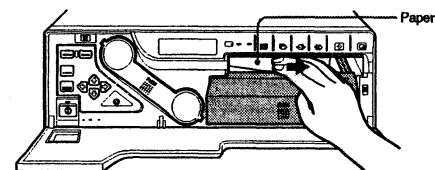
- 1 Open the front panel.
- 2 If any printouts have been ejected to the paper cover and have accumulated on the paper cover, remove them. If not go to the next step.



- 3 Turn off the power of the printer.
- 4 Remove the paper tray.
When you can see paper inside the printer, go to step 5.
When you cannot see paper, go to step 8.
- 5 Slowly pull the paper into the paper tray.

Note

Never attempt to pull a jammed paper down, up, backwards, or forwards. The paper may tangle or tear.
If you cannot pull the paper, go to the next step.

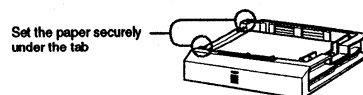


- 6 Remove the paper tray.
If the paper has jammed around the slot where the paper is fed, remove it.

Continue to next page →

Error/Warning Messages (continued)

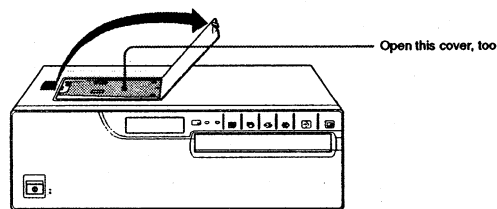
- 7** Load the paper into the paper tray correctly.
Do not reuse the paper put back in step 5. Discard that paper.



- 8** Remove the ink ribbon cartridge.
If there is a jammed paper, slowly pull out the paper.
If the ink ribbon cartridge cannot be removed, the printer must not be operated. Contact your Sony service facility.

When you cannot see the jammed paper, go to step 9.

- 9** Open the top white cover, then the black cover.
If the paper has jammed inside, slowly pull the paper out.
If the jammed paper cannot be removed, the printer must not be operated. Contact your Sony service facility.



- 10** Re-insert the removed paper tray, paper cover or ink ribbon cartridge if you removed, then close the front panel.

- 11** Turn on the power of the printer.
When the message does not appear, you can use the printer as normal.
However, the image captured to memory have been cleared. Capture the image to memory again.
If the same message appears again, the printer must not be operated. Turn off the power immediately and contact your Sony service facility.

Note

Do not open the top cover during printing because of mechanical hazard. If you do, turn off the power switch of the printer.

Troubleshooting

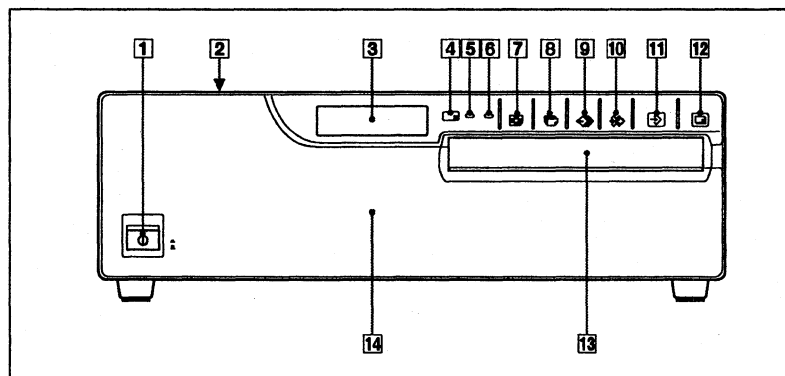
The following troubleshooting checks will help you correct the most common problems you may encounter with your unit. Before proceeding with these trouble checks, first check that the power cord is firmly connected. Should the problem persist, unplug the unit and contact your Sony dealer or local authorized Sony service facility.

Symptoms	Possible causes and remedies
Nothing appears on the monitor even if you press any operation buttons.	<ul style="list-style-type: none"> • The POWER switch of the printer is not set to ON. → Set the POWER switch of the printer to ON. • The POWER switch of the monitor is not set to ON. → Set the POWER switch of the monitor to ON. • Connections may not be correct. → Check connections and rectify, if necessary. (see page 65)
No message appears on the regular screen.	<ul style="list-style-type: none"> The incorrect signal is input. → Select another input signal by using the INPUT SETUP menu (see page 14) Or, set the connected video equipment to playback mode, if it is currently set to another mode such as stop mode. → In this case, first check the monitor by pressing the SOURCE/MEMORY button to display the image stored in memory. If an image appears, the monitor is working correctly.
No message or image appears on the regular screen.	<ul style="list-style-type: none"> If an image captured in memory appears when the SOURCE/MEMORY button is pressed, SOURCE on the OUTPUT SETUP menu is set to THRU. → Change the SOURCE setting to EE. (see page 72)
The printer does not print.	<ul style="list-style-type: none"> An error message appears on the display. → Perform the steps described in "Error Messages" on page 103.
A black line appears on the printout.	<ul style="list-style-type: none"> Any portion for which there is no signal is printed in black. → Shift the printout area. Capture a new image and print it. (see page 82)
The printer produces a printout with a black frame.	<ul style="list-style-type: none"> Any portion for which there is no signal is printed in black. → Make the printout narrower. Capture a new image and print it. (see page 82)
The printed image is partially cut out.	<ul style="list-style-type: none"> Only part of the video signal has been stored. → Make the printout size wider. (see page 82) Capture a new image and print it.
The printout is blurred.	<ul style="list-style-type: none"> A quickly moving image has been stored. → Set MEMORY on the LAYOUT SETUP menu to FIELD.
The printout color is very pale.	<ul style="list-style-type: none"> The paper is not loaded correctly. → Check which side of the paper is the printing side, then load the paper again. (see page 12).

Location and Function of Parts and Controls

For details, refer to the pages given in parentheses.

Front



- 1** **POWER switch (14)**
Press to turn the printer on or off.

- 2** **Top cover (on the top panel)**
Usually, do not open this top cover. Only in case the paper has jammed inside the top cover, open the top cover to remove a jammed paper.
If you open the top cover, there is the other black cover.

- 3** **Printer window display (only for UP-2800P/2850P/2900MD/2950MD)**
Displays the messages that also appear along bottom edge of the monitor screen. Also displays the menu screen line to which the cursor is positioned. If an error occurs, a corresponding error message is displayed. The printer window display can be cleared with the SYSTEM SETUP menu.

- 4** **Remote sensor (64)**
Aim the head of the remote control unit toward this sensor.

- 5** **PRINT lamp**
Lights while the printer is printing.

- 6** **ALARM lamp (103)**
Lights in orange when the ink ribbon or paper is exhausted, the paper jams, or another problem occurs.

- 7** **MULTI PICTURE button (35, 41, 48)**
Press this button to select the desired printout type. When you press this button, the currently selected printout type lights green for two or three seconds. Each time you press this button, the type lights green in the order.
In FLEX IPP mode, this button is used to select the LOAD SIZE number to load the preset size of the image. When you press this button, the currently selected LOAD SIZE number lights green for two or three seconds. Each time you press this button, the LOAD SIZE number lights green in the order.

- 8** **PRINT QTY (quantity) button (21)**
Press this button to set the number of copies. You can set any number up to 9. You can change the number even when the printer is printing.
However, you cannot decrease the number of copies using this button. In such a case, reduce the number of copies on the PRINTER SETUP menu. (see page 19)

- 9** **MEMORY PAGE button (22, 31, 43, 48, 49, 60)**
Press to select the memory page.

- 10** **SOURCE/MEMORY button (17, 40, 48, 49, 60)**
Press to select which signal is to be output to the monitor.
The memory image and source image are toggled each time you press this button.

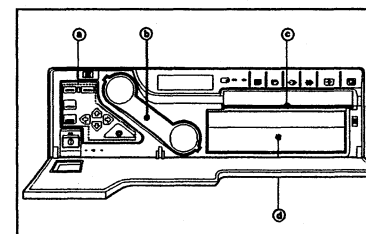
- 11** **CAPTURE button (17, 22, 40, 41, 48, 49)**
Press to capture an image to a memory page.

- 12** **PRINT button (17, 18, 23, 41, 43, 48, 49)**
Press to make a printout.

- 13** **Paper ejection slot**
The printout is ejected here.

- 14** **Front door**
Pull the top on the front door toward you to open it.
Opening the front panel reveals the sub panel buttons, ink ribbon cartridge, paper tray and paper cover.

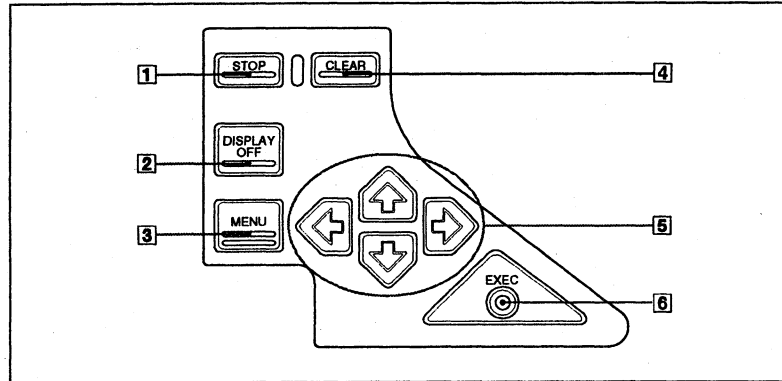
When the front panel is open



- a** **Sub panel keys**
For details, see "Sub Panel"
- b** **Ink ribbon cartridge (9, 62)**
Insert the ink ribbon cartridge.
- c** **Paper cover (62)**
Paper is ejected onto this cover.
- d** **Paper tray (12, 62)**
Load paper into this tray.

Location and Function of Parts and Controls (continued)

Sub Panel



1 STOP button (18)

Press to stop printing midway. By pressing this button, the current printing complete and printing after this is cancelled.

2 DISPLAY OFF (18)

When the menu is displayed, pressing this button temporarily clears the menu display. While this button is held down, the menu display disappears. When the regular screen is displayed, pressing this button toggles on and off of the screen display (such as messages, Q1, A and similar) regardless of setting of the item of DISPLAY on the OUTPUT SETUP menu

3 MENU button

Press this button to display or clear the menus on the screen and printer window displays.

4 CLEAR button (59, 60)

Press this button to clear the images captured in the memory pages. Which images that can be cleared with the CLEAR button depends on the setting made with the FUNCTION SETUP menu.

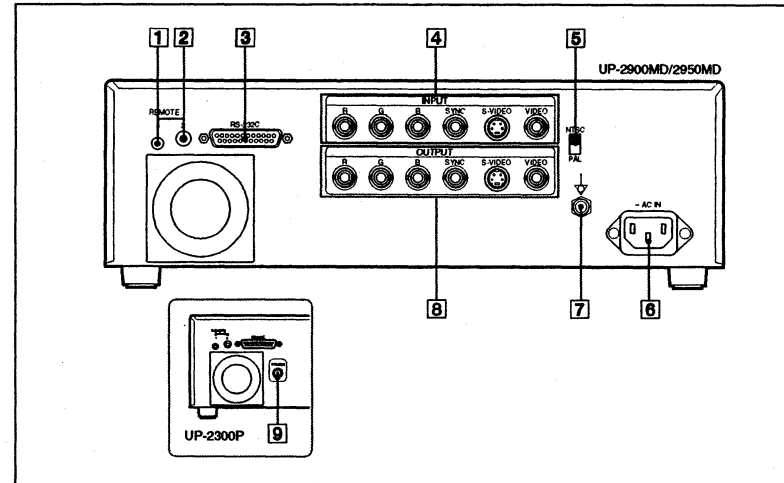
5 Cursor keys

Use to select a desired item from the menu by pressing the \uparrow or \downarrow button and set the value by pressing the \leftarrow or \rightarrow button. Also, these keys are used to position the cursor (green) on the regular screen.

6 EXEC button (52, 53, 55, 79)

Press this button to execute the values set with the COLOR ADJUST menu or to register a setting to the SAVE SIZE number on the SYSTEM SETUP menu. Also, this button is used to enter the characters of a caption.

Rear



1 REMOTE 1 connector (special mini jack) (67)

Used to connect the RM-5500 Remote Control Unit (not supplied) to be used as wired remote control unit.

2 REMOTE 2 connector (stereo mini jack) (67, 101)

Used to connect the RM-91 Remote Control Unit (not supplied), the FS-20 or FS-36 Foot Switch. Or input remote control pulse signals for automatic printing.

3 RS-232C connector (67)

Used to connect the computer to control the printer. For details, contact your nearest Sony dealer.

4 INPUT (input signal) connectors (65)

Used to connect the video equipment supplying the source image.

Connector	Connectable equipment
S-VIDEO	Video equipment with Y/C separated output connector.
VIDEO	Video equipment with composite video signal output connector
RGB SYNC ^{a)}	Video equipment with RGB/SYNC output connectors.

^{a)} Models other than the UP-2300P are equipped with the RGB/SYNC connectors.

Refer to "Important safeguards/notices for use in the medical environments" on page 2.

Continue to next page →

Location and Function of Parts and Controls (continued)

- 5 NTSC/PAL (NTSC/PAL TV) selector**
(only for UP-2900MD/2950MD) (65, 66)
Set this selector according to the TV system of the input signal. If you change this setting, turn the printer power off, then back on again.

Selector position	When setting
NTSC	The NTSC system video equipment is connected.
PAL	The PAL system video equipment is connected.

- 6 ~ AC IN connector**
Used to connect the printer to a wall outlet with the supplied power cord.
- 7 Equipotential ground terminal connector** ∇ (for models other than UP-2300P)
Used to connect to the equipotential plug to bring the various parts of a system to the same potential.
Refer to "Important safeguards/notices for use in the medical environment" on page 2.

- 8 OUTPUT connectors (66)**
Used to connect the video monitor.

Connector	Connectable equipment
S-VIDEO	Video equipment with Y/C separated output connector.
VIDEO	Video equipment with composite video signal output connector
RGB SYNC	Video equipment with RGB/SYNC output connectors. ^{a)}

a) Models other than the UP-2300P are equipped with the RGB/SYNC connectors.

Refer to "Important safeguards/notices for use in the medical environment" on page 2.

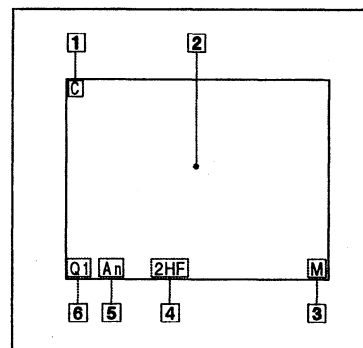
- 9 STROBE (X-terminal) (only for UP-2300P)**
Used to connect to an electronic flash which lights at instance the image is captured in the memory.

Monitor Display

There are two types of display: the regular screen display and menu screen display. The two types of display are explained using the monitor display.

Regular screen display

When you first turn on the printer, the regular screen message appears.



- 1 C (Caption) display section**
C is displayed in white when the printer is set to print a caption consisting of the date and/or comments.
- 2 Message display section**
Messages are displayed.
- 3 S or M (Image type) display section**
This indicates the type of image being displayed on the monitor screen.
S (Source): The image from the input signal source is displayed on the screen.
M (Memory): The image stored in memory is displayed on the screen.

4 Printer operation mode display section

Display	Meaning
1, 2, 2H, 4, 16	Indicates the printout type in STANDARD mode.
2 * 2, etc.	Indicates the number of images to be printed in one (2 * 2) in this case, four images are printed in one paper) in FLEX IPP mode.
IPP1, IPP4, etc.	Indicate the printout type in FLEX IPP.
STK-DUP4, STK-DUP16	Indicates the sticker mode in which identical four- or 16-reduced images are printed in one paper in DTIK DUP mode.
STK-DIF4, STK-DIF16	Indicates the sticker mode in which different four- or 16-reduced images are printed in one paper in DTIK DIF mode.

a) When the SEPARATE (image with the white borders) is set to ON on the LAYOUT SETUP menu, F is attached. For example, 4F.

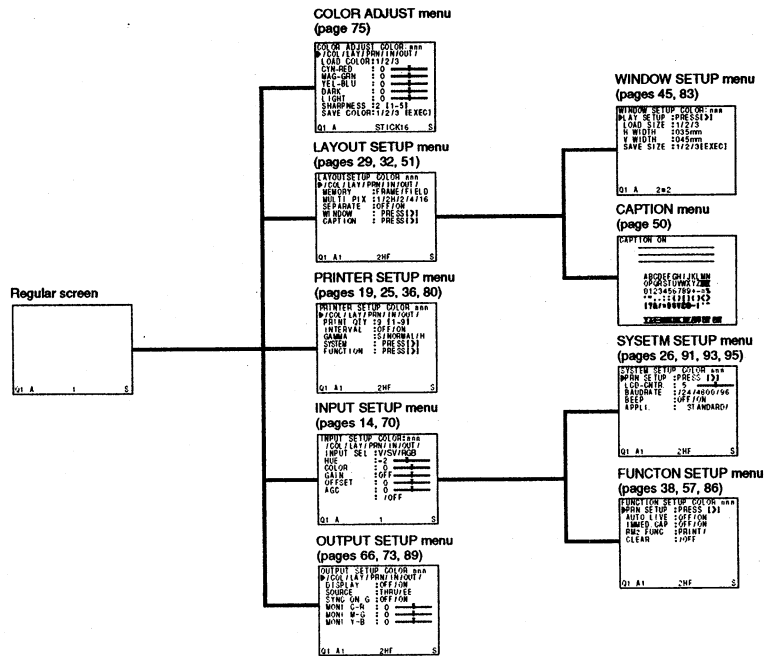
- 5 Memory page display section**
Indicates the currently selected memory page. While the image in the memory page is being printed, the memory page indication blinks. The memory page whose memory image is queued to be printed lights in green.
- 6 Q (print quantity) display**
Indicates the number of copies to be printed. This item blinks while the printer is busy.

Location and Function of Parts and Controls (continued)

Menu screen

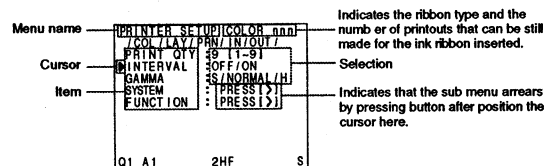
Menu screen tree chart

The menu screen configuration is shown using the tree-chart. For details, refer to the pages indicated in ().



Menu screen display

Example: SYSTEM SETUP menu screen



Index

A, B

Accessories (supplied) 61
Adjusting
input signal 69
color of the printer's output signal 72
printout area 82
printout color 75
printout size 84
printout tone 80
sharpness of the printout 78
Assembly 62
Automatic printing
pulse signal 101
selecting operation mode 87
Baud rate for computer communication 95

C

Caption
CAPTION menu 50
entering 51
making a printout with a caption 55
Changing the printout size/printout area 82
Cleaning 98
COLOR ADJUST menu 75
Color printing pack 99
Condensation precautions 97
Connections
for enabling remote control 67
for storing video images 65
for viewing images to be printed on the video monitor 66

D

Deleting the images stored in memory
pages
deleting all images stored in the printer 59
deleting images in a certain memory page 60
setting the function of the CLEAR button to be used for deleting images 56
Display
erasing screen display 89
monitor display 113

E

Eliminating the blur 17
Entering a caption
adding characters mid ways 54
entering a caption 51
entering a space 54
replacing a previously entered character 54
when you enter a wrong character 53
Error messages 103

F, G, H

Foot switch 63, 67, 85
Full-size printout
making 16
setting 33
FUNCTION SETUP menu 38, 57, 86

I, J, K
Identification photograph printout 43
Ink ribbon cartridge and paper 99
Ink Ribbon cartridge
loading 9
if your ink ribbon should tear 11
notes on storing 11
notes on using 11
removing 9
Installation precautions 97

L

Loading an ink ribbon cartridge 9
Loading paper 12
Location and function of parts and controls
front 108
monitor display 113
rear 111
sub panel 110
Location precautions 98

M, N, O

Memory page
selecting the memory page 29
usable memory page 28
Menu
CAPTION input screen 50
COLOR ADJUST menu 75
FUNCTION SETUP menu 38, 56, 86
INPUT SETUP menu 14, 70
LAYOUT SETUP menu 29, 32, 51
OUTPUT SETUP menu 66, 73, 89
PRINTER SETUP menu 19, 25, 36, 80
SYSTEM SETUP menu 25, 91, 93, 95
WINDOW SETUP menu 45, 83
Menu screen display 114
Monitor display 113

P, Q

Paper
ink ribbon and paper 99
loading 12
notes on storing 13
removing the jammed paper 105
Paper jams 105
Paper 12, 62
Paper tray (not supplied) 99
Precautions
cleaning 98
condensation 97
installation 97
safety 97
transportation 98
Print quantity setting 19
PRINTER SETUP menu 19, 25, 36, 80
Printing
eliminating the blur 17
if a black line appears on the printout 18
if the image quality of printouts is not satisfactory 18
if the paper runs out during printing 21
if the printer does not print 18
if the stored image is blurred 17
making a full-size printout 16
making a printout for sticker 42
making a printout of multiple reduced images 32
making a printout of identical reduced images (for identification photograph) 43
making a printout with a caption 55
making a printout with an insert 41
Making printouts with white borders 34
printing remotely 63
selecting the memory page 31
selecting the printout type 32
storing another images while printing 22
Printing pack 99
Printout area 84
Printout color
color intensity 77
contrast 77
sharpness 78
Printout size 83
Printout quality
adjusting the printout color 75
adjusting the sharpness 78
compensating for the input signals 69
eliminating the blur 17
Printouts
with a black line 84
with black frame 83
partially cut 83
notes on storing 18
Printouts variations 7, 24
Pulse signals 101, 102

Index (continued)

R, S

Remote control unit (not supplied)
 foot switch 63, 67, 85
 remote control unit 63, 67, 85
 Safety precautions 97
 Screen display
 erasing 89
 erasing temporarily 18
 Selecting the input signal 14
 Setting up the printer with menu
 adjusting the printer window display
 brightness 91
 adjusting the printout color 75
 adjusting the sharpness 78
 changing the printout area/printout size
 82
 compensating for the input signal 69
 erasing the screen display 89
 selecting operation mode for automatic
 printing capabilities 85
 selecting whether to enable the
 operation and error tones 93
 setting baud rate for computer
 communication 95
 Sharpness 78
 Specifications 100
 Sticker 42
 Supplied accessories
 assembly 62
 supplied accessories 61
 System configuration 8
 System overview 7
 SYSTEM SETUP menu 26, 91, 93, 95

T to W

Troubleshooting 107
 Using the automatic printing capabilities
 85
 Warning messages 104

